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VENTURING

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This book is the first teaching manual on “Venture business” in Kazakhstan. In an accessible form it deals with the history of emergence, main principles and mechanisms of functioning of venture business, basic kinds of venture entrepreneurship subjects (venture investors, venture enterprises, organizations of venture infrastructure etc.), the role and importance of public authorities in formation of systems of venture business support. The special attention is paid to consideration of venture management as one of the kinds thereof directed on development of young innovative firms by means of attracted venture capital and venture financing of projects.

For students of economic and technical specialities of higher education establishments, instructors, as well as for all those who are interested in issues of development and control of venture entrepreneurship.

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PREFACE

The present stage of global economy globalization demands to search for new methods and forms of innovation processes control. Control systems of innovative activity of Kazakhstan enterprises are insufficiently developed regarding requests of the present highly competitive environment. The global experience of solution of financial and organizational problems of innovation processes development has proved to be efficient in formation and development of venture entrepreneurship as a valid mechanism of stimulation of innovative growth of industrial enterprises. While having sufficient innovation potential, domestic branches of economy require significant financial investments for creation and production of science-intensive products. Working out principles and formation of systems of venture entrepreneurship efficient control will allow an increasing inflow of investments to the real sector of economy, will favor essential acceleration of development of economy of Kazakhstan and its economy restructuring.

Attraction of the venture capital as a way of target investing of innovation developments should become the catalyst of introduction of innovative technologies at domestic enterprises. However the majority of aspects of ventures control remain insufficiently researched. There is no theoretical groundwork regarding the essence and special features of the venture entrepreneurship. One needs further researches on kinds and forms of the venture entrepreneurship, mechanisms of venture enterprises interaction with subjects of a venture innovation infrastructure as well as on questions of construction of venture management systems of enterprises. Considering that, it seems topical to publish a manual to help experts, innovation managers concerning a control system of innovative venture activity of innovations financing processes.

The aim of the manual – study of theoretical statements and applied recommendations directed on formation of venture organisations control system. It will enable students:

- to understand the essence of basic concepts of the venture entrepreneurship;
- to study classifications of kinds of venture enterprises and venture capital funds, to become familiar with organizational forms of venture entrepreneurship;
- to consider mechanisms of interaction of venture entrepreneurship subjects within the frameworks of the venture activity cycle;
- to analyze peculiarities of planning and organization of internal, external and "independent" ventures at industrial enterprises;

- to become familiar with prerequisites of venture business development in Kazakhstan as well as in the world;
- to develop skills of development of business presentations and writing of business plans for venture investors;
- to have formed the ability to search, evaluate and select potential individual and institutional investors by managers of innovative enterprises;
- to master skills in evaluation of cost-effectiveness of venture financing of projects and criteria of making decisions on expediency of projects implementation by venture investors.

The study of «Venture business" discipline assumes having methodical and deep knowledge on disciplines «Innovation management", "Innovation projects control" and so on; demands a purposeful work pertaining to study of special scientific as well as industrial literature, an active work at lectures and at practical classes, independent work and performance of individual tasks.

The purpose of lectures consists in showing to students the basic theoretical and historical aspects of venture business development worldwide, studying mechanisms of interaction of venture entrepreneurship subjects, in divulging the main schemes of venture financing and organizational forms of venture business construction, in researching prerequisites of venture entrepreneurship establishment in Kazakhstan.

The publication of the manual will promote:

- acquisition of basic categorial apparatus of venture entrepreneurship;
- consideration of historical stages of of venture business establishment worldwide and of mechanisms of state stimulation of its development;
- study of basic kinds of venture enterprises and venture capital funds and special features of their functioning;
- familiarization with mechanisms of interaction of venture investors, venture capitalists and innovators;
- generation of practical interest in construction of venture management systems at domestic enterprises and in attraction of the venture capital for innovation projects implementation.

During the study of the discipline students should:

1. Acquire skills at creating venture financing schemes of projects.
2. Develop abilities at drawing up of effective business proposals and a target writing of business plans for prospective venture investors.
3. Study sources of search of the venture capital; be able to choose potential venture investors, conclude agreements about venture capital attraction as well as to

form optimum structure of the venture capital of enterprises according to existing approaches to venture investment in the world.

4. Form skills at evaluating venture financing cost-effectiveness of projects and at defining venture capital investment efficiency for all subjects of venture entrepreneurship.

5. Define the general information field regarding problems and prospects of venture business development, place and significance of individual branches of economy in global venture area.

Part 1. VENTURING BASICS

1. ESSENCE AND IMPORTANCE OF VENTURE ENTREPRENEURSHIP

"Venture business is when one invests means in ten companies, half of them go bankrupt, in three cases the investments return, one company grows tenfold, and in one more company the profit exceeds investments hundredfold".

(Tim Draper, well-known venture entrepreneur)

1.1. Nature of venture business and its content

Venture business development as private property institution, is a consequence of pooling of an intellectual potential with a financial resource.

Natural necessity of evolutionary development of capitalization of a financial resource with the subsequent separation of venture business is caused by inability of a traditional financial system to offer a flexible and effective mechanism of financing of small innovative structures. The traditional financial system does not allow evaluating perspectivity of development and introduction of a breakthrough idea on the basis of the widely used financial examination of an investment project. Especially as traditional funding sources are not ready to sharing in so high investment and administrative risks.

In the venture business, as well as in other areas of economic relations the person predominates as to the place s/he occupies as one's significance: s/he is considered not only as a source of human physical or intellectual work, but first of all as the bearer of highly skilled knowledge in the area of high technologies, of creative thinking skills, as the bearer and owner of a basic know-how of a venture project that has pragmatic and mercantile value.

Along with «intellectual potential» terms «intellectual capital» «human capital» are widely used as well and, due to it «venture capital» is suggested to be used that seems not quite correct.

Theodore Schultz was one of those who have made an attempt to make definition of the human capital. In the article «Capital Formation by Education» [177] T. Schultz presented manpower costs estimations, including expenses for education, and also the costs of job the person loses while studying.

Let us notice that T.Schultz's reasonings and conclusions can be true for the developed countries whose governments have created all necessary conditions for capitalization of the acquired educational potential. And under these conditions the required capitalization of educational potential of employees occurs automatically – «Capital Formation», and that is why T. Schultz has the right to use the term «capital». In this case the social and economic system as a whole is the traditional self-organizing system controlled by means of introduction of investment flows (as well as investment flows arising within the system itself, in particular, in its economic subsystem) owing to existence of communication channels among subsystems [36].

Although T. Schultz's calculations were inaccurate, and he himself addressed to the students and colleagues asking them to specify, his concept was gradually recognized, until it became clear, that the education capitalization is a decisive factor. As a matter of fact, T. Schultz became the father of the revolution of human potential investments.

More conservative (and, in our opinion, more accurate) terms are those used by international organizations in their analytical reports, as well as by individual scholars of the post-Soviet countries: «intellectual society resource», «intellectual society potential» [36].

De Soto considers that the capital corresponds not to an accumulated reserve of assets, and to potential of development of new manufacturing [32, p. 49].

Let us try to approach to the capital, as to the potential in a critical way. For that we will consider the concept of the capital in the mentioned Peruvian scholar's interpretation in more details. The potential, as is known, is connected with statics, and the capital as K. Marx asserts, arises in the process of labor, owner thereof sells it as a commodity, that is, it has a dynamic nature.

In the third chapter of the quoted above work De Soto formulates «mystery of capital» - latent effects of fully confirmed private property – confirmed not only and not so much for the protection of property rights to property, as for capital movement. In this case he sees six effects of the private property [32, pp. 56-69]:

- a) fixation of economic potential of assets;
- b) integration of scattered information;
- c) owners' responsibility;
- d) increase in the liquidity of assets;
- e) social ties development;
- f) passportization of deals.

It is appropriate to notice, that from the list of effects which, according to the author [32], initiate and support the process of capital creation, none of them is directly

connected with the tangible wealth and money. The tangible wealth and money as a resource can be used as an initial basis of cost increase, but are not the cause, the initiator of its increase. Hence, material and financial elements are potential resources, which alone are not sufficient for initiation and support the capital creation process though the capital cannot be obtained without them. The availability of material is necessary (restrictive), but not decisive (majoritarian) conditions of creation of the capital. It seems to us, that when comparing the capital with the energy the term «kinetic energy» is more suitable instead of the potential as supposed by De Soto. Because the potential is a static indicator and additional value is not generated in the statics. In other words, the capital – a category not of a reserve but of a flow.

The aforementioned analysis leads us to an idea, that the capital cannot be considered as the good (tangible material or intangible) as a resource, and it should characterize the state of the good (resource). That is more appropriate to speak not about the capital, and about the process of capitalization of the good, that is self-reproduction (according to K. Marx – «self-expansion of cost») [98, pp. 164-165]. If to take into account this, generally well-known, characteristic of the capital, then the six effects of the private property given by De Soto become more clear (and appropriate in respect to the capital «self-reproduction») [32, pp. 56-69].

The «human capital» term, having a rich history marked by names of A. Smith and K. Marx, continues to be used along with «human resource» and «human potential». We consider that this inconsistency in terminology is a matter of principle. As it was noted above, the human resource and the human potential can be identified with certain stretches with the human capital in economically advanced countries, but on no account in the developing post-Soviet countries. In the latter only the human resource is produced (the potential is accumulated), and it is capitalized mainly abroad in the mentioned highly developed countries – there, where more suitable conditions have been created for that. It is of importance to understand venture business.

Despite of the lack of terminology unification, the important issue in the venture business is the ownership of intellectual products of the person, as a part of a functional resource, on the one hand, and estimations of this product. Modern economists treat «human potential» concept in different ways. But virtually all of them agree to that that human potential being capitalized is a driving economic force of a society, and that the state, and not just an individual alone, participates in capitalization of human potential. The theory of human and intellectual potentials (capitals) is still being researched; however it is of importance to understand the nature of venture business.

Both the intellectual and human potentials are a necessary condition of qualitatively higher capitalization rate of achievements of science and education. That allows using more effectively the functioning potential and other positive external factors within the limits of overall manufacturing process (both material and nonproductive), first of all, by introduction of innovations, search for new, more improved forms of production and so forth. It was the given integration that became that mechanism, that basic economic foundation on basis of which from a capitalized financial resource another qualitatively new economic phenomenon of market economy - the venture capital emerged.

In the venture business one puts financial resources into projects related to the use of original ideas and knowledge which in the economy of knowledge turn into the intellectual potential of higher level, capable to be further capitalized. The latter is an independent factor of production by its nature and form of participation in a manufacturing process. It is herewith that the cost estimation of the intellectual potential influences the final cost of an intellectual product. By analogy with the aforementioned interpretation of the capital, together with the term «intellectual potential» the term «intellectual capital» is widely used which, in our opinion, is less accurate than the first one, and has the limited sphere of reproduction: potential or resource under some conditions is capitalized, and under others - is not [109].

V.L. Inozemtsev defines the intellectual capital as «Information and knowledge, these specific factors, by their nature and forms of participation in manufacturing process, within the frameworks of firms assume the aspect of the intellectual capital.

The intellectual capital corresponds to something like "collective brain", accumulating scientific and everyday knowledge of employees, intellectual property and accumulated experience, communication and organizational structure, information networks and image of a firm» [56].

The components of the intellectual potential, according to V.L. Inosemtsev are:

1) the human capital embodied in employees of a company in the form of their experience, knowledge, skills, abilities to be innovative, and also to be perceptive to general culture, philosophy of a company, its internal values;

2) the structural capital including patents, licences, trade marks, organizational structure, databases, electronic networks [56].

B.B. Leontyev treats the intellectual potential of one or another subject as the cost of set of intellectual assets s/he has, including the intellectual property, one's natural and acquired intellectual abilities and skills, as well as databases one stores and useful relationships with other subjects [83].

An actual creative property of a separate person acts as a material basis of intellectual potential capitalization of oneself, of human association or a society as a whole. A social essence of the intellectual potential is nature of possession, disposal and use of these properties.

The venture business is closely related to the human factor and includes possibilities of financial and intellectual resources. A particular innovative transformative possibility of the venture capital consists in this. First, venture business shows itself in special intellectual work in those reproduced processes, where it acts as one of production drivers. Second, it is connected with an entrepreneurial activity representing innovating, inventive act along with readiness to risk one's property, nonconventional motivations and so on. Functioning of venture business, its whole life cycle is accompanied by special system of so-called venture management: informational support, planning, organization, control, regulation. Creation of venture business from a financial resource, its functional isolating is related to integration thereof with a human resource. The given integration, in our opinion, acts as that basic economic foundation on basis of which from a financial resource qualitatively different economic phenomenon - the venture business emerges.

Functioning of venture business in sphere of intellectual production causes the creation of a unique product — knowledge. The significant amount of added value which is generated by intellectual work in manufacturing, under conditions of lower organic composition of the capital in comparison with traditional production in venture firms is a basis for venture entrepreneurs to get excess profits.

Basis of the economy of knowledge are investments into the human potential and information technologies and also creation of conditions for their capitalization. There is a number of theoretical developments in the area of evaluation of capacity for intellectual potential capitalization. For example, they propose to evaluate the intellectual capital (the intellectual potential and its capitalization capacity) by the Tobin's q ratio. It is determined as the ratio of a market value of assets (market capitalization) of a company to book (replacement) value of its assets. Thus for the intellectual capital this ratio is higher than 1 [39-187]. There is an offer to calculate the intellectual capital as the difference between a market value of a company, calculated as the product of the price of one share multiplied by their total number, and a book value of assets [188].

These and other approaches to determination of the intellectual capital cost reflect only its subjective individual estimations through the prices which have objectively established in the market. An institutional component as the state with its legislative

framework, programs of the government support of innovative activity is excluded in these calculations. Undoubtedly, such approaches do not allow explaining obvious advantages of the intellectual potential and furthermore, of the human potential in efficiency of capitalization (added value creation), showing an objective basis of cost increase in the course of intellectual production.

In spite of the use of a significant amount of intangible factors in the intellectual production, the financial resources advanced in the venture business undergo all metamorphoses connected with capitalization of resources in the sphere of production and circulation.

The human potential is the basic production factor of the knowledge economy and gives a number of essential advantages to the one who has them to the owner of physical means of production. After sale of knowledge or passing of information about it to other people and organizations the knowledge itself remains at its immediate producers and the information about it those who have it can take to the market virtually any number of times. Moreover, knowledge is inexhaustible treasure, - and this is the main peculiarity of the human capital, - knowledge grows faster and in more quality as far as it is used in production. This phenomenon of knowledge predetermines special features of new cost creation in venture firms and corresponds to an objective basis of existence of venture business in the knowledge economy.

The given examples allow drawing a conclusion concerning an organic composition of production assets in the knowledge economy in comparison with traditional industrial economy. Owing to impossibility of objective estimations of intangible assets of innovative firms only indirect confirmation of such estimation is possible. The western statistics measures the human potential applied in production in man-hours. One should take into account that venture capitalists, as a rule, do not direct financial resources to the projects connected with purchase of an expensive and unique equipment, yielding this scope of activity to the state, and they use the equipment provided by technoparks, incubators, universities, corporations what allows them to save on fixed charges. In the knowledge economy the amount of attracted venture finances identical to applied in the traditional industrial sector of economy, allows creating the larger quantity of added value. This added value is caused by a low organic composition of the capital and creates an objective basis for higher rate of return which is received by venture investors compared with ordinary investors. For example, the average rate of profitability of investments in the economy of developed countries makes up 14-15% while venture investors expect to get at least 25 %. At that it is necessary to notice, that the certain part of venture investors invests into small venture firms where the capital

circulation term is 1.5-2 years, whereas on average in economy, for example, of the USA term of capital consumption makes up 3-6 years.

Relying on the experience of venture business development in the developed countries, first of all in the USA, it is possible to assert, that the venture business develops and functions on the basis of objective factors of development. By creation of the economy of knowledge, transformation of physical production means means the formation of venture business occurs. On the other hand, an important part of this problem is development of economic forms and institutes on the basis of the venture business which role increases through transformation of innovative production to leading social production sector.

Besides economic, investment or purely financial functions, the venture business also performs services related to control, marketing, and information service and so on. Venture business provides for making of modern scientific and technological researches. It occurs as it creates up-to-date forms of diversification, interfirm collaboration and cooperation, and also possibility of use of nonconventional funding sources of risk projects by small innovative firms.

Peculiarity of venture business functioning is its coherence first of all with orientation to the human factor. It is people, the mental potential who represents a basis of this market functioning. Among operators of this market it is necessary to single out two components in its organizational structure: small innovative firms and venture financing funds. To accelerate innovation processes in the USA they widely use quasi-risk venture organization forms on the basis of organizational separation of divisions for solution of concrete scientific and technical problems. The main feature of such innovative structures is a planned nature of their emergence and a centralized supply with resources.

Concerning peculiarities of the venture market functioning in Kazakhstan one should mention the lack of own financial means, qualified personnel to organize large-scale researches, a great risk when they are conducted. Impossibility of patenting of fundamental science results is typical too. The latter leads to that that companies join their efforts to make researches and developments.

A distinctive and specific form is organization of joint ventures of «new style» where a small science-intensive firm and a large company unite. Within such an association the venture firm develops a new product, and the large company provides it with a financial assistance, research equipment, supplies with sales channels and caters for. Peculiarity of relations of large corporations and small venture firms is their contract form and both parties preserve their own economic and legal independence.

Consortia with the participation of large industrial firms making scientific production can be the most effective ones, according to western experts. These are the consortia creating industrial corporations to conduct their own long-term research works of fundamental and applied nature (having own laboratories and research centers with permanent staff); consortia which are created for stimulation of research works «elsewhere». As such participants, along with large corporations, universities act as well.

It is science parks that about 80% successful small firms originate from, in the meanwhile, only 20% such firms achieve success outside of industrial parks. An industrial park actually minimizes the risk of non-productive outlays for development and sale of science-intensive technologies and goods on the basis of small entrepreneurship.

By means of venture financing the technological niches, formed by the large monopoly capital, are occupied. Small innovative firms penetrate these technological niches. As a whole formation of structure and mechanism of the venture business market is a complex process connected with development of productive forces and STA.

Reproduction of public productive forces on a qualitatively new expanded basis is the result of production in the knowledge economy. Functioning of venture business is connected with exercise of ownership of the product of intellectual production by ensuring monopoly on knowledge and with acquisition of income by a venture businessman as a payment for risk. The monopoly of a venture businessman on knowledge acts as the cause of income formation, and the condition of creation of large amount of an added value in the innovation process where venture business was directed, is its low organic composition in sphere of intellectual production.

There is a lot of definitions of venture business, but nevertheless all of them boil down to its functional task: to assist the growth of concrete innovative business by provision of the certain amount of means in exchange for a share in a collective investment fund or some holding of stock.

Venture investment is made in the form of direct investments into companies which, as a rule, are at initial stages of development. Venture investments assume an increased degree of risk in exchange for prospect of profits higher than an average. In exchange for sharing in the risk, a venture capitalist can receive compensation in the form of profit, royalty, preferred stock, equity value growth and so on.

In an textbook of innovation management edited by S. Ilyenkova [189] - means invested by not only large companies, but also by banks, insurance, pension and other funds into an increased risk area, into a new business which has arisen, extends, or

suffers from abrupt changes. Unlike other forms of investment the given form has a number of specific features:

- investor's share in company capital in the direct or indirect form;
- investment of means for a long time;
- investor's participation in running of the company backed by him.

As a result of the analysis of the nature and essence of the venture business it is possible to define its economic substance as synergy of interaction of a financial resource with an intellectual human potential. Forming as a result of reproduction process in economy, the venture business is such an integration of the mentioned relations to which synergetic effect of influence on business activity in economic management systems by innovative activity development in them is inherent. All that gives the ground to consider the venture business as a special factor of an innovative economic growth transfer of economical systems to the innovative type of development, effective structural renewal of economy.

1.2. Main categories of venture entrepreneurship

The scientific and technological advance avoids virtually no sphere of socio-economic life. Application first of all of innovative knowledge and technologies under conditions of globalization promotes achievement of competitiveness of separate enterprises and branches of industry as a whole. At the same time development of innovative activity at industrial enterprises demands provision of special organizational and financial preconditions. On the one hand, innovative activity demands creation of creative atmosphere in collectives, generating of commercial ideas, expansions of formal authorities of heads of organizations; on the other hand – quality, deep marketing researches and check of such ideas with consideration of fast changing requirements of the market, provision for target and timely reception of required quality and volumes of financial, information, material and manpower resources. It is the absence of such conditions that restricts innovative activity development of the majority of enterprises. In the world economic science they continue continuously to search for new, better methods of innovative activity control. Venture entrepreneurship should become one of ways of solution of financial and organizational questions of activization of innovative processes at domestic enterprises.

In the post-Soviet countries various ways of introduction of innovative solutions into economic management practice were generated for years of economy reformation.

So, on the basis of an original division of labor between large corporations and small enterprises there emerged a special kind of entrepreneurship – financial and innovative. At that small organizations which are called ventures deal with the activity on production and market advancement of new goods. However volumes of similar cooperation grow slowly.

Some scholars consider, that the word “venture” has appeared due to shortening of an English word adventure, by truncation of the particle *ad*, and ventures are called this way because of “adventurous” nature of their activity.

The review of literature concerning the problem [58, p. 387; 81, p. 28; 115, p. 170; 102, p. 285, etc.] allows drawing a conclusion that there is a lack of single agreed terms and concepts of venture entrepreneurship. Various sources give inaccurate, often inconsistent definitions of the same concepts. Therefore, considering special features of venture activity control, it is necessary to specify first of the content of basic venture entrepreneurship terms.

Venture entrepreneurship – initiative risk activity which is financed owing to attraction of the venture capital and is directed on a considerable growth of market values of the invested objects, including by reception, use and commercialization of results of scientific researches and developments, market launch of new competitive technologies, goods and services [115, p. 170; 147, p. 567].

The object of venture entrepreneurship is risk (venture) activity during which new technologies, goods and services are created and introduced. Objects of venture entrepreneurship include: intellectual property, innovative products (processes), and innovative programs, venture projects, contracts (agreements) between subjects of venture innovative activity, stock (shares) of innovative venture companies, new technologies, commodity output, raw materials and so forth.

Venture entrepreneurship as initiative risk activity reflects an integral system of financial relations concerning accumulation, attraction and putting of monetary funds (venture capital) into objects of investment to develop and commercialize results of scientific and technical researches, reception of incomes as a result of a considerable increase of market value of invested enterprises and getting of social effects.

Stages of venture activity provide for: searches for sources of investment means, formation and attraction of funds of the venture capital; venture investment, that is transformation of incoming financial (venture capital), material and intellectual resources to final products of venture activity; transformation of invested resources to increment (capitalization) of market values of the invested objects (enterprises);

achievement of venture activity goals by way of reception of incomes (effects) by both venture investors and other subjects of venture entrepreneurship.

Venture programs – set of interdependent venture projects that provide for reception, use and commercialization of results of scientific researches and developments, market launch of new competitive technologies, goods and services.

A venture project – set of interdependent measures which are taken by means of attraction of the venture capital for introduction of results of scientific and technical knowledge, market launch of new goods, works and services.

However, let us mention: in the literature there is no single accurate definition of venture capital. Theoretical researches and the analysis of economics scholars' opinions have shown that a new way of investment of means of large companies, banks, private investors, pension, insurance, investment funds into venture innovation projects is the venture (risk) capital reflecting system of relations between subjects of venture entrepreneurship. It provides for accumulation of available assets and investment of them into innovation projects to research, master and commercialize innovations. It is formed and subjected to redistribution with the participation and support of the state [58, p. 387; 81, p. 11; 96, p. 16; 115, p. 170; 10].

The venture capital – long-term direct financial investments of share nature. They are put mainly for 3-7 years by individual and institutional investors (venture capital funds) for creation and development of young innovative enterprises, independent divisions or isolated subsidiaries of large companies, financing of their reconstruction and modernization in exchange for shares of property of such enterprises, which, as a rule, less than controlling interests, but simultaneously ensure investors the rights of running the invested enterprises and a financial control over target use of funds to realize potentials of growth of recipient enterprises, to increase their market value and investors' exit from business through sale of their shares of property.

This interpretation discovers the content of the venture capital concept in its broad, "traditional" understanding. However in case of independent risk divisions of enterprises it is necessary to consider narrower understanding of the risk capital providing a share investment of means into innovation projects which can bring in returns (effects) to its investors due to commercial use of results of development works, with the right of participation in ownership of a potential enterprise in case of possible separation of division in a legally isolated enterprise.

In the course of *venture investment* there occurs not only an ordinary putting of financial resources into an enterprise, but also investing of other material and intangible resources of venture investors as software products, know-how, patents, licences, rights

to property objects etc. Though not all investors make venture investments in their broad understanding, usually investing financial resources, but the fact itself of reception of the venture capital as financial resources is criterion of acquisition of venture status by an enterprise.

The *subjects of venture entrepreneurship* that perform risk activity and/or attract property and intellectual values invest their own or borrowed funds into realization of venture projects include:

1. **Subjects-generators of innovative knowledge;** they are physical persons – inventors and rationalizers, innovators and entrepreneurs, employees of higher educational establishments, of research and development institutes, having scientific and technical products (patents for inventions, test models, know-hows).

2. Venture investors – suppliers of the venture capital. They include individual investors who can independently put their own means into innovative enterprises (in the foreign literature they are called "business angels"), institutional investors: private and public companies, divisions of bond houses, large corporations, pension and insurance funds etc. Often they rate venture capital funds as venture investors, however the analysis of literature allowed drawing a conclusion: to put them in this group is inexpedient when they are separate organizations with an established structure of management and invest not their own means, but those of other organizations attracted on the shared basis of joint investment.

3. **Organizations of venture innovation infrastructure.** They include organizations which give various financial, information, manpower, material and technical resources to venture organizations directly occupying themselves with scientific and technical researches, development of novelties and commercialization of them. One recommends putting venture capital funds, venture capital companies in just this group of subjects of venture entrepreneurship. However in a case, when funds of the venture capital invest own means (funds of innovative enterprises, organizationally established family funds, corporate venture capital funds) one can rate them as venture investors.

4. Venture innovative organizations directly concerning themselves with scientific and technical researches, development of novelties and commercialization of them. They are mostly small enterprises in technologically progressive branches of economy dependent or specialized divisions of large companies, complex innovative structures, connected by contract relations, receiving the venture capital for scientific researches, developments, for creation and introduction of innovations which organization is

connected with an increased risk. Such organizations include: "independent" venture enterprises, internal ventures (*spin-off and spin-out*), external venture structures.

5. Subjects of both state and private regulation of venture innovative activity (associations of the venture capital, networks of business angels, and other associations that stimulate and regulate the activity of subjects of venture entrepreneurship).

6. Subjects of consumption of venture innovative production. They are natural and legal persons – consumers of venture activity products.

Let us consider in detail the essence and importance of venture entrepreneurship subjects in the venture activity.

Venture investors. Pension funds, insurance companies, large corporations, banks make a formal market of the venture capital. In a number of post-Soviet countries private pension and insurance funds cannot fully participate in formation of a domestic market of the venture capital because of legislative restrictions. So, private pension funds cannot form their assets out of securities of emitters which are not listed on a stock exchange or information trading system. Nonconventional sources of venture financing forming an informal market of the venture capital include well-to-do private individuals: in a business circle, they as was mentioned above are called business angels [142].

Set of enterprises, organizations, establishments and their associations, associations of various forms of property that render services to provide for venture activity is labeled as the *venture entrepreneurship infrastructure*. These are venture capital funds, companies of the venture capital, finance and credit institutions, scientific institutes, engineering companies, incubators, broker establishments, higher education establishments, state networks of the venture capital and other innovative intermediaries [58, p. 389; 147, pp. 566-567].

Thus, one should consider as **innovative intermediaries** organizations that do not take part directly in creation of innovations, and optimize directions of movement and volumes of financial, information, material and technical and human resources for commercialization of scientific and technical developments. They are consulting firms, "headhunters", gatekeepers, asset management companies, auditor firms, innovation centers etc. [112].

Functions of innovative intermediaries include: evaluation of scientific and technical and commercial potential of new developments, rendering assistance in a legal registration of the rights to intellectual property, the market analysis and creation of a business plan of implementation of new technologies, search for prospective customers of intellectual property objects, legal support of purchase and sale transactions of

intellectual property objects, administrative consulting for small technological innovative companies (STIC), search for and attraction of the venture capital for new projects, innovation projects control etc.

Intermediaries between investors who have decided to combine their capital and a venture enterprise where means are invested at a high risk level are venture capital funds – specialised dependent or independent organizations of the venture capital [3, p. 14; 4, p. 172; 7, p. 551; 8, p. 284; 9, p. 95; 10].

Investment managers control means of venture capital funds and venture capital companies. They can be natural persons and work for themselves (venture capitalists) or work as investment managers of assets management companies of venture funds.

Asset Management Companies (AMC) are legal bodies that perform asset management activity on the basis of a corresponding licence to carry out such activity. The first modern venture capital management company was created in the Great Britain [17].

Considering the weight of criterion according to which innovative enterprises are ranked as venture ones, as well as discrepancies in the wording of the venture capital concept, we will notice: often they confuse concepts of "venture enterprise" and "innovative enterprise". Considering that that the risk capital is the basic criterion to rank enterprises as venture ones, and also considering more accurate definition of the venture capital essence, we offer definition of "venture enterprises" concept.

Venture enterprises – these are young innovative enterprises, isolated divisions or subsidiaries of large companies, scientific and technical associations of enterprises which have potentials of growth and attract the venture capital to realize innovation projects, modernize and/or refit enterprises technically, launch new products (works, services), that favors substantial growth of market values of the invested enterprises.

Mechanisms of interaction of venture enterprises, venture capital funds, AMC and other intermediaries involved in venture financing, will be considered in detail in the following topics.

The circle of venture investments by stages of the venture activity and system of interaction of all subjects of venture entrepreneurship can be represented as a venture cycle.

System of interaction of all subjects of venture entrepreneurship – venture enterprises, venture investors and commodity producers of new competitive products (in a case when these organizations ensure production and sale of venture innovative production, but do not perform a venture innovative activity themselves) – owing to a

developed infrastructure of venture entrepreneurship we suggest to call a sphere of venture (risk) activity.

Graphically the interaction (interrelation) of all subjects of venture entrepreneurship is shown in fig. 1.1).

Considering a variety of a network of organizations which participate in the venture activity, peculiarities of their creation, role and significance, functions and mechanisms of participation in venture processes by subjects of venture entrepreneurship we will consider in the following parts.

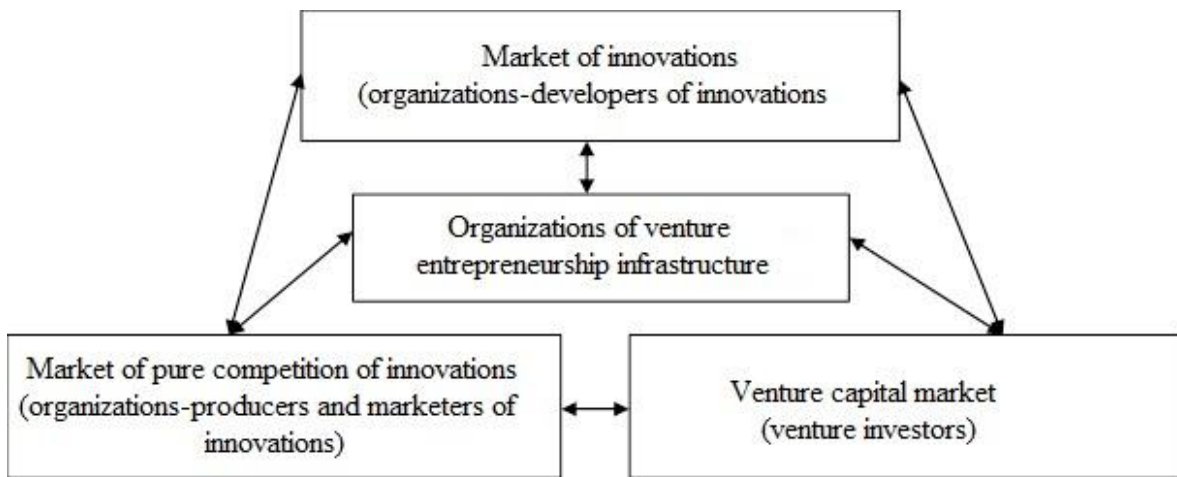


Fig. 1.1. Venture activity area

1.3. History of venture entrepreneurship development

There are various versions of history of venture entrepreneurship origin. Though not all of them have been grounded scientifically, the majority of them are of interest to become familiar with.

According to one of the versions venture, i.e. innovative initiative, adventurous, entrepreneurship emerged in XV century - during the Age of Discovery. In those far times in Europe there was a well-known prince of Portugal, Henry the Navigator Dom Enrique o Navigator (1394, Porto - 1460, Sagres) – expert in mathematics, physics, geography and other subjects. He financed expeditions for study of the western coast of Africa, but put not his own means, but money of the ecclesiastic knightly Order of Christ headed by him. For these means (and they were collected on the basis of contributions of participants) the prince established an observatory, a nautical school that at scientific level they developed a type of caravels for voyages round the world.

That is scientific and educational developments were taken as a principle of distant voyages, highly educated people and inspirers of risky venturesome adventures financed and managed thereof who aimed at reception of significant profits in case of their successful completion although they risked a lot in case of failures of such projects. Discovery of Madeira (1418-1419) and the Azores (1427-1431) was one of the results of the given expeditions.

Other opinions concerning history of emergence of venture projects dealt with geographical discoveries again. This time Christopher Columbus was the inspirer of a risky project (L. Christophorus Columbus, It. Cristoforo Colombo, Sp. Cristóbal Colón), world-famous by his discovery of America (1492). Having familiarized himself with scientific works and theoretical viewpoints of leading scientists about a spherical shape of the Earth, he decided to realize the idea of voyage to India. For this purpose he several times submitted "project" to consideration of well-known state bodies of Portugal (Council of mathematicians at court of King João II, the Commission of scientists in the structure of Chamber of Accounts at court of Queen Isabella in Castile, Council of the University of Salamanca). After several years of considerations all theoretical grounds of Ch. Columbus about that that the Earth is round, were rejected and they decided not to finance his idea of voyage to India. However, as a result, a royal family from Castile and Aragón agreed to finance the project. Thanks to their means Ch. Columbus implemented his plan and the design of long standing [21].

The majority of lands discovered by two aforementioned seafarers turned into colonies, and a military and political expansion together with an economic one led to an unprecedented enrichment of Portugal and Spain.

Venture entrepreneurship of new times originates in the USA in the mid-1950s of the XXth century. Development of a new kind of business began in Silicon Valley (California) – cradle of modern information and telecommunication technologies. Here for the first time a new alternative funding source of innovation projects at early stages of their development – the venture capital was attracted. "Venture capital" concept emerged owing to an investment manager an American Arthur Rock (Arthur Rock, b. in 1926). He used this term in 1957. This expert of an investment bank company supported an offer of a semiconductors production engineer at "*Shokley Semiconductor Laboratories*" Eugene Kleiner (1923-2003) to carry out an investment project. Being in search for financial resources, an inventor and innovator Kleiner and his several colleagues wrote a letter to an investment manager A. Rock in order to attract the funds of a company where the latter worked, for realization inventors' idea to manufacture silicon transistors of new type.

The investment company used to disagree to finance such projects and did not allocate means to introduce in life ideas supported only by inventors' enthusiasm. In spite of it, an experienced manager A. Rock liked the idea and he showed the letter to a partner, having convinced him to fly together to California for a more detailed study of Kleiner's offer.

After their meeting it was decided that Rock would set to look for investors to collect US\$ 1.5 mln for project financing. The manager addressed to 35 corporate investors, but nobody of them dared to participate in financing of the offered deal, although almost everybody showed interest to his offer.

In those days practice of creation of new firms for the purpose of realization of absolutely new ideas and of financing of projects in embryo was alien to conservative investors. Nobody agreed to allocate means for a theoretical project. It seemed that the undertaking was doomed to fail. However A. Rock and his colleagues did not give up the project. A decisive point for foundation of the first venture firm and formation of mechanisms of venture financing of innovative ideas there was an acquaintance of A. Rock with Sherman Fairchild (1896-1971).

The latter was an inventor and already had experience of creation of new technological companies. It was he who gave the required US\$ 1.5 mln to finance the silicon transistor production project. So there emerged the first venture enterprise "*Fairchild Semiconductors*" – initiator of all semi-conductor companies of Silicon Valley.

"*Intel*", "*Apple Computer*" was created by similar schemes of venture financing. Rock's name then became a synonym of success, and it was he who was given priority as for initiation of processes of the venture capital attraction and investment thereof into previously selected highly remunerative projects. A. Rock – the first venture capitalist who thanks to entrepreneurial abilities and business experience was able to choose a really attractive project, to collect means for its realization – the venture capital, and to carry out successfully silicon transistors production project. In a year and a half he returned to venture investors 20 mln of profit.

Thus by means of the syndicated investment mechanisms of venture financing were created. The first institutes of joint investment institutes (ISI) as investment companies were established in Belgium in 1822, and the first investment fund was created in the Great Britain in 1831. However it was in 1924 when a historical development of investment funds started when "mutual fund" ("*Massachusetts Investment Trust*", the USA) was established. Venture capital funds started to be called this way since 1957, after an expert of an investment bank company A. Rock

used "venture capital" concept [17; 138]. The first venture capital fund was not set up as an organizationally established fund – it was only investors' association. "Traditional" venture capital fund was formed a little later: means from it were directed on development of ideas of new products production and creation of new enterprises to this purpose.

The first "traditional" venture capital fund organizationally established by A. Rock in 1961, made up US\$ 5 mln, from which it was, invested only US\$ 3 mln. Corporate investors were not interested to put means in obscure financial structures, but nevertheless results of performance of the fund turned out impressing: A. Rock having spent US\$ 3 mln, in a short period of time returned to investors almost US\$ 90 mln.

Another venture capitalist of the period of venture financing origin – Thomas Perkins (Thomas J. Perkins, b. in. 1932) is well-known too. He made a sufficiently risky deal at about the same time, as A. Rock did. While working in David Packard's company, one of co-owners of world famous nowadays company "*Hewlett-Packard*", T. Perkins invented an inexpensive and easy-to-use laser with a gas pumping. All his savings – US\$ 10 tsd put away to purchase a house, he invested into a new enterprise. The product turned out successful: after a short spell T. Perkins was able to sell his firm to "*Spectra-Physics*" company. Together with Kleiner he fully devoted himself to venture business development.

The well-known venture *capitalists of the XXth century* - already mentioned A. Rock and Thomas J. Davis, Jr. () in San Francisco, Frederick R. Adler in New York and Franklin P. Johnson, Jr. (and Bill Draper (William Henry Draper III) in California. Distribution of mechanisms of venture financing was hindered by that that it was rather difficult to create new companies because of lack of qualified entrepreneurs and venture managers, absence of a developed venture infrastructure et al. Considering increased requirements to venture capitalists concerning an operational experience in the investment area, interfunctionality of their knowledge in technical sphere, area of business and the law, having intuition and a business image of the successful entrepreneur, there quite few of them and they could not help all inventors to carry out their projects.

A successful example of realization of venture schemes of financing and a rapid growth – "*Cisco Systems*" company, one of the world leaders of production of network routers and telecommunications facilities. In 1987 Don Valentine at "*Sequoia Capital*» acquired for US\$ 2.5 mln the holding of stock of "*Cisco*", and in a year the cost of his shareholding was US\$ 3 bln.

In the USA the venture capital formation was favored by development of new branches of economy, by growth of Americans' consumer demand for new goods and services connected with development of US economy and increase of citizens' well-being.

The modern giants of computer business "*DEC*", "*Apple Computer*", "*Compaq*", "*Sun Microsystems*", "*Microsoft*", "*Lotus*", "*Intel*", "*AOL*", "*e-Bay*", "*Google*", "*Yahoo*" became those what they are now, thanks to the venture capital. Besides, the venture capital promoted occurrence and development of new branches of industry – personal computers manufacture and biotechnology.

So, the venture financing emerged and brought the first successes in the USA. Initial venture projects were directed on investment into instrument making enterprises and dealt with: silicon transistor development ("*Fairchild Semiconductors*" company – initiator of semiconductor companies of Silicon valley, as it has already been mentioned, headed by the venture capitalist Arthur Rock), a laser printer ("*Spectra-Physics*" company headed by the venture capitalist Tom Perkins), network routers and improvement of the telecommunication facilities (world leader in telecommunication equipment development "*Cisco Systems*" company, headed by Don Valentine) and other devices which appeared in the USA at support of the venture capital.

Let us summarize the considered material.

Venture entrepreneurship – initiative risk activity, financed owing to attraction of the venture capital and directed on a considerable growth of market values of the invested objects, including by reception, use and commercialization of results of scientific researches and developments, market launch of new competitive technologies, goods and services. The object of venture entrepreneurship is risk (*venture*) activity during which venture projects and programs are carried out. Subjects of the venture entrepreneurship are subjects-generators of innovative knowledge, venture investors, organizations of a venture innovative infrastructure, venture innovative organizations - recipients of the venture capital, subjects of both state and nongovernmental venture innovative activity regulation, subjects of consumption of venture innovative production.

Venture capital is considered as long-term direct financial investments of share nature that are put as a rule for 3-7 years by venture investors for creation and development of young enterprises having significant potentials of market growth, including due to development and introduction of objects of intellectual property. Venture capital investors – individual persons (business angels) and institutional organizations. Intermediaries between venture investors and companies that need

financing - dependent venture capital funds or independent ones and venture capital companies. During the venture capital attraction, the receiving enterprises achieve the status of venture ones. In the course of their activity such enterprises carry out venture projects and programs which usually promote their rapid market growth.

Test questions and tasks

1. Define the concept of "venture entrepreneurship".
2. Name the venture entrepreneurship subjects.
3. What is the venture enterprise?
4. Tell about the main suppliers of the venture capital.
5. Who are the venture investors?
6. Describe the venture entrepreneurship infrastructure.
7. Describe the "venture capital" concept.
8. How do the venture entrepreneurship subjects interact?
9. Analyze the area and cycle of venture activity.
10. Whether all innovative enterprises are venture ones? Explain.
11. Who is the initiator of venture financing mechanisms?
12. Name the companies which connect their development with attraction of the venture capital.
13. Who of venture capitalists do you know? What projects were backed by them?
14. Consider the versions of historical origin of the venture business.

2. VENTURE INVESTORS AS VENTURE CAPITAL SUPPLIERS

2.1. Essence and kinds of venture investors. Mechanisms of interaction of venture enterprises and venture investors

Basic suppliers of financial resources forming the venture capital - venture investors are natural and legal persons as well as associations of them putting means into venture capital funds. They can establish a fund as the venture capital investors' association without or with incorporation in organizationally established venture capital funds.

Venture investors are theoretically divided into two kinds – individual and institutional.

Institutional investors are legal bodies (enterprises, insurance and pension funds, insurance companies, investment banking firms, state bodies and establishments etc.) which put means into venture capital funds, guided by a group decision of their boards. That is the form of decision-making on investment of means into funds of support of young fast-growing firms is not an individual, but a group one and complies with a policy and strategy of the organization that makes investment.

Individual venture investors include the aforementioned business angels as well. They are important active investors at an initial (at «seed» stage) stage of venture financing in which significant investment risks are inherent. A venture enterprise in such situation demands a pressing financing, and exactly at that time institutional venture investors with the least initiative put their means. That is why at this stage a crucial role in venture enterprise development is played by business angels.

Business angels (individual investors) are mainly rich private informal investors (successful entrepreneurs, managers, business area experts) who put their means, knowledge, experience into young little-known scientifically technological (innovative) enterprises in exchange for a share of such enterprises property.

A. Kashirin puts into business angels both physical and legal bodies that invest into innovative enterprises at «seed» stage from US\$ 0.1 to US\$ 1 mln. [62].

Business angels belong to an informal market of the venture capital; therefore it is difficult to define its volumes and to predict development trends. Pension funds, insurance companies, large corporations, venture capital and investment funds, investment banking firms, venture capital companies make a formal market of the venture capital. The aforementioned organizations virtually do not back venture enterprises at the early stages (periods) of development and avoid high risks. Moreover,

venture capital funds offer considerably larger sums of financing, than those required by innovative firms at the early stages of development. Therefore it is informal investors - business angels – who remain the only source of investment resources for those enterprises venture capitalists refused to finance.

The statistics of countries of Western Europe and of the USA [22] confirm increase in individual investors' role in financing of the early stages of venture enterprises development. In the USA, for example, "seed" and initial stages of venture financing account for only 30% of all investments of an institutional sector, other funds come from informal investors. In investment structure of the USA and Western Europe about 70-80% of all investments of individual investors go to financing of start-up and young venture firms and only 20% - of mature and established enterprises, in Sweden and Denmark – 30%.

There are both advantages and drawbacks of business angels' financing.

Advantages:

1. It is the only funding source of enterprises with a high potential of growth at the early stages of their development.
2. There is a wide choice of investors who offer the sum of investments a young enterprise needs at this stage of development. Financing volumes vary within the range of US\$ 50 tsd. to US\$ 2 mln. .
3. Investment of means into various branches of industry, but into enterprises with high potential of growth.
4. Speed and flexibility of decision-making on investment of means, simplicity of procedure of registration of the decision.
5. Lower rate of profitability of investment in comparison with other venture investors.
6. Active administration of an enterprise, giving of an additional free assistance and of consultations for business development.
7. Wide geographical location of informal investors in comparison with the formal market of the venture capital.
8. Both image and business reputation of an individual investor serve as the precondition for an enterprise to get further financing through the formal market of the venture capital.
9. Private investors' recommendations, credit guarantees make a positive impression on creditors of a young enterprise.
10. Agreeing with high risks of the investment activity.

Drawbacks:

1. Investing in enterprises at the initial stages of their development and an actual refusal to back later stages of project life cycle.

2. Local investments preference that is enterprises are financed only at the area where a potential investor lives and works.

3. An excessive activity in administration of an enterprise causes the individual investor's captious and total control.

4. The inconsistency of investor's experience and knowledge in a case when the latter has experience in a pretty narrow area different from the scope of activity of a new enterprise.

5. There are no investents into enterprises with a low growth potential.

6. Differences between the investor's personal goals and the purposes of the founder of a venture enterprise.

7. Distinctions of motives of investment depending on the individual investor kind. Investing for investor's entertainment leads to success of the invested enterprise only at times.

8. Usually private investors have no reputation of a national institute and do not give guarantees in the international market of capitals.

9. The small amounts of the individual investor's contribution may entail a significant cession of stock (votes) of a new enterprise and the loss of the founder's actual control over an investment object [65].

To avoid these misunderstanding it is crucial for owners of innovative firms to learn about various kinds of investors - angels before they will have decided to pick one of them. Such awareness will help to increase efficiency of evaluation process of optimal angel selection. The selection of a preferable investor can favor company development or risk enterprise failure.

Individual investors (business angels) differ among themselves in sizes of possible investments, experience, knowledge, motives which induce to put means, and also in investors' goals.

In the area of angel financing there are various typological kinds of business angels. There is no single classification of them, sometimes individual investors are divided by mixed signs, but this division reflects as well rather broad groups of individual investors that are found in the venture business.

They distinguish the following main kinds of the venture capital informal investors:

- corporate angels – private investors, former heads of large companies. The main motive of investment of funds into a new enterprise for them is looking for a new job for

themselves, in particular to become the head of a new company. They put their means into just one project, and invest on average US\$ 200 tsd, although they may put into up to 1 mln;

- angel entrepreneurs – the most active investors among angels, successful acting entrepreneurs, managers. The purpose of their investment activity – expansion of their business, and not searching for a new job. They mostly invest of US\$ 200-500 tsd;

- enthusiasts - angels who are less professional in the business area, than corporate angels and angels entrepreneurs. Investment process for them is a hobby; therefore they do not always take an active part in the running of an enterprise. Usually they invest small sums (from US\$ 10 tsd. to several hundreds of thousands) into several companies to achieve success at least in one of the projects;

- angels - micromanagers prefer to control over the investment object by sitting on company board, and not by an active management of its current economic activities. They can finance simultaneously several enterprises, investing into them not only monetary funds, but also useful knowledge, experience, and business connections. Such investors mainly apply the same development strategies to the invested enterprises, as in activity of their own companies. Usually they may invest means into separate projects of US\$ 100 tsd. – US\$ 1 mln;

- professional angels - ones with a successful professional career. Doctors, lawyers, accountants investing funds into the enterprises of their kind of activity, offer own experience and knowledge to the invested enterprise free of charge, however they are not active in its management. They mainly invest means into several firms at the same time of US\$ 25 tsd. – US\$ 200 tsd together with colleagues of the same kind of activity. Sometimes they attract their invested objects to the following rounds of venture financing.

The identification of other types of business angels is interesting as well:

Core angels. They are persons with a large business experience who successfully ran their businesses. They have been accumulating their own considerable fortunes for rather long time period. Such investors perform business angel duties as their professional activity. They invest the capital into new investment projects in spite of unsuccessful previous affairs and financial losses. Such investors form investment portfolios from diversified projects, putting both the public and private capital into risk projects, real estate and so on. Such investors are mostly respected for valuable advice, guidance on various issues regarding the invested companies development.

High-tech angels. These investors, probably, have smaller business experience, than the core angels, however invest much more, following the most advanced trends in

the high-tech area. Their investment decisions depend first of all on prospects to occupy weighty niches in high-tech markets which can essentially change a public life. Such angels are not worried by risks accompanying projects in the high technology sphere, and on the contrary, they gladly try to help to develop breakthrough technologies. The majority of these angels avoid an active involvement in administrative processes of the invested companies as they not always like routine work – pending business conduct.

Return on investment (ROI) angels. These investors are mostly motivated by financial reward of their "adventurous" investments. Their main task – making significant profit on own investments. ROI angels do not invest into projects when the market capacity is small and its growth is insignificant or if there are no possibilities for growth and improvement of products. They consider each of their investment projects regardless of others in the portfolio. Therefore each of the projects that have been invested by such investors should yield the maximum return on the investments. Such business angels not so actively participate in administration of the invested companies.

Head angels, aka "lead dogs". These people are actual leaders among the angels, who can attract other investors to the deal. They champion and represent interests of the group of angels, and also take an active part in negotiating processes and signing of agreements on investment. Such angels enjoy their right to be the first ones in preparation of agreements, as well as in administrative processes and realization of investment possibilities of enterprises.

Mentor angels, aka "guardian angels". These individual investors – advisers and mentors for managers of the companies invested by them. Such investors' advising, intuition for young companies, and also mentoring to businessmen-managers of the companies is important and much more valuable, than financial investments, and favor success achievement by such companies in the market.

Generational angels, aka "silver spoons with silver wings". Such investors – the second generation of angels from successful angels' families. They are usually younger than average investors, but that does not prevent them from sharing an acquired significant job experience in family business.

Intentional angels, aka "dark angels". Such angels invest the capital and are especially interested in the control over company operation, that is always keep abreast of company development. However their real goal is not investing and enterprise development, and an intended target removal of founders and concentration of the company in their own hands.

Typical angels, aka "arch angels". They describe themselves as a typical kind of business angel investor, everybody has read and knows about (for example, investors

putting means for the purpose of growth of net worth of an enterprise; investors who back because of their public responsibility and social obligations and so forth).

Inexperienced angels, aka "cherubs". Such investors just begin to acquire experience and to gain trust in the angel financing area. Generally they more often put funds into those projects where other angels refuse to invest. Meeting obstacles in the market, many of them, contrary to problems, continue to finance, and others, probably, simply avoid obstacles and problems and refuse to make further investments.

Female angel organizations. Despite rather controversial opinion, that angel financing deals with purely male scope of activity, there emerged organizations of angels-female investors. Such female networks first of all direct their investments to the educational sphere and that of legal services. Often female syndicates of angels extend their activity to various branches of industry. However such syndicates not necessarily mean, that they put means into those companies which are run by women or belong to individuals of this sex.

Venture capitalists who are also angel investors, "moon light as angels". Risk enterprises in the course of getting of the venture capital should correspond to rigid rules which are applied to investment objects by independent venture companies. Venture capitalists are divided into those who strictly adhere to these unwritten rules, and those who can not follow their venture companies' policy. The latter sometimes decide confidentially and independently to invest the capital or to participate in co-investment, especially, if they get investment offers attractive, but not corresponding to the venture company policy. Co-investors of such projects may become the venture company partners, and venture angels-capitalists - support early innovative projects regardless of their companies to ensure their strong financial positions in the invested objects at later stages of development. One of the reasons why venture capitalists moonlight as business angels is that that they find chances of investment development of the firms not corresponding to requests of the venture capital companies, but are simultaneously able to ensure extremely attractive investment possibilities for venture capitalists, in case when they decide to invest the capital independently.

Will work-for-equity angels aka "sweat-equity angels". Such investors are service providers; they intend to exchange payment of their services for percent of shares in the company. If a young company has made use of this kind of service, it often preserves monetary funds in the long-run. The problem which, probably, will arise during this exchange: an entrepreneur not fully realizes the right of full-blown exchange of each part of the share capital of own enterprise; there is capital washing out, that is the investor loses an economic gain that could be received when there is a real investment

of means. Moreover, it is difficult to define cost of services and the similar share of the capital for barter.

Non-company building angels aka "technology angels". This is a kind of investors who focus their attention first of all on technological development of a firm, on its products (technologies) improvement, instead of formation of their own diverse portfolio of companies. As is known, such angels help entrepreneurs to improve and license inventions.

Regardless of business angel kind, the majority of them can ensure the necessary consolidation of financial, intellectual, social, technological capital for the start of young enterprises operation. However this process of investment and coexistence in the company is difficult, many difficulties arise then when entrepreneurs do not understand the investors or show incompatibility of their views with investors; or investors create unreal expectations for themselves from entrepreneurs of the invested firms.

To lower investment risks potential investors ever more often unite in syndicates and alliances of the business angels. That helps them to invest collectively, by combining capital, and to diversify risks. Advantages of investment through syndicates over individual business angels for a venture enterprise is expansion of business contacts and investment experience which becomes accessible via attraction of a significant amount of investors, increase in possibilities of attraction of funds from other syndicate participants. Disadvantages – it takes more time from the moment when the proposal to finance a project is submitted till the one when decision to invest is made, since in that case the project is evaluated more in detail at a venture forum, the object of investment is fully checked. Peculiar intermediaries between capital possessors and innovation project developers are business angels' networks. They allow receiving the information as by potential investors about attractive venture innovation projects, as by venture entrepreneurs about business angels interested in risk financing.

Young venture enterprises need both financial and information and consulting support. Experience of the countries of Western Europe as well as North America shows that such services for venture entrepreneurship development are rendered by business angels, syndicates, alliances and networks of them. Unfortunately, in the post-Soviet countries the similar organizations have not yet developed properly.

As already mentioned, business angels to diversify investment risks inherent in the early stages of venture enterprises development in particular, can unite into syndicates and alliances of business angels. In order to ensure anonymity of members of such syndicates, the latter appoint representatives of business angels for negotiating and representing of business angels interests at the stage of search and selection of

perspective projects. These individuals are often called “arch angels”. They head works on check, control and coordination of terms of fulfilment of investment obligations by the members of investors group. Thus the investment of additional means in current projects by other participants of the syndicate becomes more probable. For business angels the disadvantage of taking part in such syndicates is that that project participants get an insignificant share in the invested company owing to attraction of larger amount of the project participants. Those business angels, who count on an independent financing of a project and getting a larger remuneration in future, put their means alone.

The majority of business angels do not actively look for innovation projects in the market. Often they learn about possible investment projects from their friends, acquaintances etc. In those cases qualitative projects may be ignored by a business angel. For entrepreneurs of venture enterprises, not having enough information about potential investors, it is difficult to find a strategic partner. In order to solve the problem of lack of information on informal investors and attractive innovation projects, the venture capital supply and demand, networks of business angels are created [2; 22; 27; 141]. They are sort of intermediaries between owners of capital and innovation project developers, perform functions of the primary analysis and selection of entrepreneurs’ offers, informing on new projects and new registered members of the network. The purpose of their creation is to enable entrepreneurs to present their projects at the same time to a large number of business angels, and the latter - to examine a significant amount of projects and to select anonymously most attractive of them for further preliminary negotiations with inventors. Networks of business angels correspond to virtual bases of investment projects and potential investors giving detailed descriptions of the projects being in the network.

Venture enterprises can place the information on own projects on a site of business angels network, address to syndicates of business angels, and also independently search for a potential investor. For attraction of the venture capital at the later stages of venture enterprise development from venture capital funds the latter can apply for information about a venture entrepreneur to his investor (business angel) or with the request to provide such data to business angels’ network. The syndicates, individual business angels can give recommendations, credit guarantees on behalf of a venture enterprise before institutional venture investors.

The mechanism of interaction of venture enterprises with business angels, venture capital funds and their intermediaries is given on fig. 2.1.

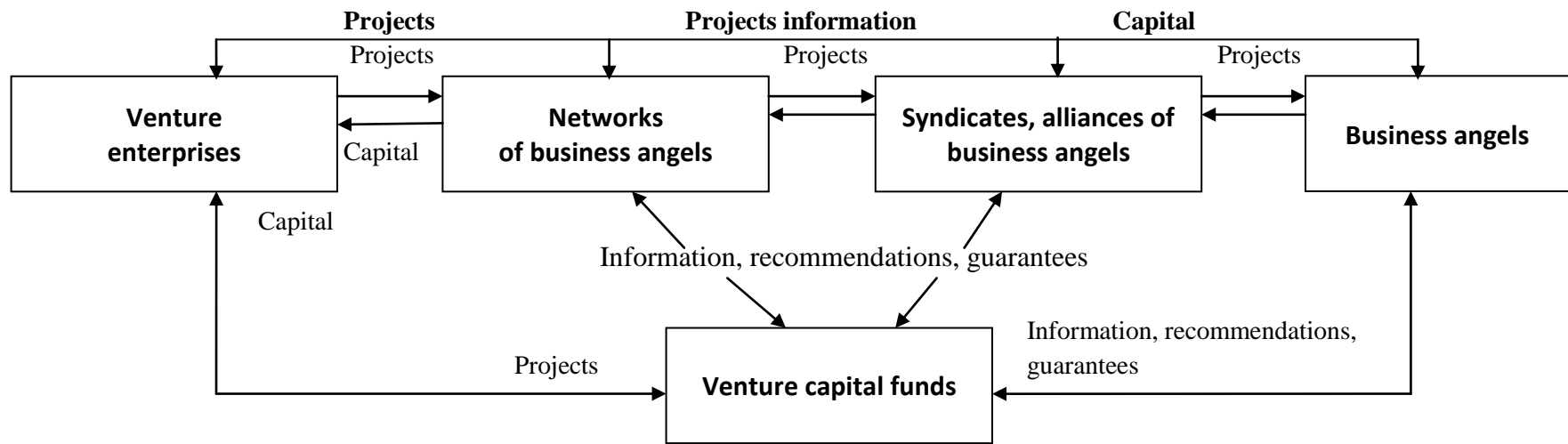


Fig. 2.1. The mechanism of interaction of venture enterprises with business angels, venture capital funds and their intermediaries

As young venture enterprises need financial and consulting support especially at initial stages of their development, for venture business stimulation and activation of its innovative activity at this stage the state support of young enterprises as well as attraction of local rich private investors to financing of such enterprises is necessary. It is important to create and develop venture infrastructure. Its subjects may become: national and regional networks and associations of private informal investors - business angels; national databases of know-how and inventions which are at the stage of research and development (R&D) and commercialization and require financing; national and regional venture capital funds for financing of the later stages of venture enterprises development and so on.

Thus, business angels - special category of individual investors. They are individuals or groups that unite in a network to invest funds into business companies, usually at the early stages of their development. Quite a few such investors ensure filling of enterprises with cash in exchange for a part of the share capital of young companies.

There is a misconception, that angels should be benefactors and promote a magic development and flourishing of young firms. These are mainly merchants who have their own goals which are very often different from those of founders of enterprises, and invest their own means to get some profit.

For young enterprises angels' financial resources are not so important as their valuable knowledge, business experience, business connections etc. The requisite of meeting and negotiations with a potential angel investor is a detailed business plan with suggestion of possible ways for such investors to exit the enterprise.

When angel investors put means into companies, they usually demand to sit on a board of directors and/or take an active part in company formation and administration. In order to avoid misunderstanding and to prevent future legal disputes in their activity, a venture enterprise needs to examine business angel in detail and approach thoroughly to disclosing of the information on rights and responsibilities of partners in the cooperation agreement.

Angel financing provides for transfer of a part of the property of invested enterprises to business angels. Unlike loans in which interests need to be paid and the received sum of funds to be returned, such financing provides for return of means only when investors exit the enterprise.

2.2. Typology and educational and professional structure of venture capitalists

Looking for the venture capital by innovative enterprises assumes the address to venture capitalists.

Venture capitalists, as was already mentioned, are investment managers who run venture capital funds or venture companies, combining functions of both asset management companies and venture capital funds.

Natural and legal persons – asset management companies of the venture capital funds can be venture capitalists who do not dispose of their own, but attracted funds. Venture capitalists concern themselves with search for prospective innovative projects for venture capital funds already established, or raise money and establish venture capital funds for prospective innovation projects. They examine a large number of investment proposals and choose the most profitable and quickly repaid projects.

Though venture capitalists conduct a search for prospective investment projects, sit on a board of directors of the invested company, in every possible way promote its fast growth, however they put not their own means but those of investors. Therefore the final decision to invest funds is made by investment committee of venture capital fund investors.

All innovative enterprises aspire to get positive decisions on investment of means from a venture capitalist, however every venture entrepreneur should remember of weight of a strategic step to attract a new partner to his activity. Venture activity success depends to a large extent on match of purposes and tasks of potential business partners: a venture entrepreneur – on the one hand and a venture capitalist – on the other.

An entrepreneur needs to know venture capitalist types that differ by goals and tasks of venture investment, enterprises investment operating procedures and so on. So, some of the European researches offered at one time the following classification of venture capitalists [44; 108]: "merchants", "banker merchants", "magicians", "manufacturers", "matchmakers", "market gardeners". All of them differ by investment purpose, professional structure, stages and volumes of investment etc.

"Banker merchants" invest small financial resources into enterprises to make marginal changes in their activity and resell at a higher price to other companies or on exchanges. Such capitalists are interested to receive a speculative income from the sale of enterprises, without putting too much efforts and finances to increase significantly the value of such enterprises.

"Magicians" - investment managers, who invest funds into problem enterprises, try to help them out of crisis and after reorganization and financial sanitation to increase a market value of these organizations.

"Manufacturers" – managers who help young enterprises with logistics, adjustment of innovative goods production methods, innovations marketing and growth stage achievement by a venture enterprise. Such enterprises are reold to large companies-manufacturers of similar production, or are openly sold on the exchange in 3-5 years after the beginning of cooperation with an investment manager.

"Matchmakers" - investment managers – specialize in financing of enterprises in some branch of industry they are familiar with; mainly they invest means into one enterprise for the purpose of development and a gain it of in the lead items in the market and thereof receive significant shares in the markets of certain branches through purchase of the competing companies.

"Market gardeners" - type of venture capitalists who invest into young enterprises at the early stages of their development or at the stage of designing of such enterprises. They usually risk financially, as undertake projects that have not proved their high market potential yet.

Statistical data concerning educational and qualification and sex composition of professional venture capitalists are interesting. According to *"National Venture Capital Association"* (NVCA) and *"Dow Jones VentureWire"*, 75% of venture capitalists make up males (55% - at the age of 25-44 years), females work mainly at venture enterprises of biopharmaceutical branch (32%), and in branches dealing with power engineering, women account only 15%. By a regional origin 87% of professional venture capitalists born in the USA, 4% - in Europe, 5% - in the Asian region. The majority of venture capitalists have received quality higher education: 19% - electromechanical and/or an engineering degree, 18% - economic, 10% - biological, 52% - have received the business administration diploma (MBA), a significant part – in Harvard, Stanford, University of Pennsylvania and MIT. It is possible to draw a conclusion, that venture business is obliged by popularity and success to the best experts in spheres of business, science and engineering. According to statistics, 22% of studied capitalists were entrepreneurs or worked at start-up companies, 20% - worked in large or medium-sized companies, 20% - at other venture enterprises, 19% came into venture business from legal, consulting firms or bond houses; 65% of venture capitalists work in one venture firm, 26 % - in two, and about 9% - simultaneously in three venture enterprises [173].

Definition of types of venture capitalists by their purposes, tasks and professional level will promote making of reasonable decisions at planning and organization of venture activity at stages of searches and attraction of venture investors.

2.3. Basic forms of meeting with venture investors

The basic forms of a meeting of innovative entrepreneurs with venture investors are conferences, venture business seminars, venture fairs and so on.

"*Silicon Valley Open Doors*" (*SVOD*) is among world-famous conferences, that attract interested venture investors and companies, aspiring to receive the venture capital, and certainly play, on a global scale, a significant role in venture entrepreneurship area [176]. This is an annual conference where entrepreneurs and professionals of hi-tech sector meet well-known venture investors of Silicon Valley and the largest technological companies of the USA. The fifth in succession conference was successfully over in 2009 and was hold on December 8-10th in the The Computer History Museum in Mountain View (California). The organizer of this conference was the American Business Association *AmBAR* – the largest non-profit association of Russian-speaking professionals in sphere of science and business in Silicon Valley. Traditionally *SVOD* conference deals with creation of science-intensive technology companies from concept till company sale or listing on stock exchange, development of partner relations between entrepreneurs and investors and other players of the high-tech market.

The conference enables entrepreneurs to:

- present their own ideas and business models to large audience of business experts, to get responses and advices;
- get a unique access to the capital, to mingle with groups of Russian and American venture capitalists of the best venture funds;
- study the market and possibility to sell production or services in the USA and in the world market;
- establish contacts with representatives of leading technological companies.

SVOD Conference for the Russian venture capitalists and representatives of the Russian Federation provided, for example, such prospects:

- get access to ideas, companies and deals coming from Silicon Valley;
- find potential partners and co-investors;

- view technological projects, previously selected by experts and created in Silicon Valley by the most talented entrepreneurs and scientists of the Russian origin.

In order to take part in the conference, start-up companies - company having a short history of operation activity) need to submit their applications to take part in a competition. The selected companies can represent themselves and their own projects and attract the venture capital for realization of projects. The entrepreneurs, selected from among other candidates, to participate in the conference must pay *SVOD* registration fee that in 2009 was, depending on degree of participation from US\$ 700 till US\$ 1100.

The important element of venture entrepreneurship system and meetings with venture investors is conduct of international venture fairs. It allows investors and initiators of projects, inventors and business representatives to communicate and submit projects in a commercialized form.

Venture fairs (venture forums) – catalysts of high-technology market development. They serve strengthening of positions in the global high-tech market. Such fairs are unique possibility for small and medium-sized companies interested in attraction of investments for development of own business, to present their projects to venture investors' attention.

The US experience has shown that conduct of venture fairs and forums solves three main goals:

1. Estimation of investment and market potential of projects in high-technology sphere.
2. Rendering of intermediary services to manufacturers and consumers of science-intensive projects.
3. Increasing of educational level of participants of fairs regarding various financial instruments usage.

So, the informal venture capital market is represented by angels. They are mainly informal private wealthy investors (successful entrepreneurs, managers, business area experts) who put their means, knowledge, experience into young little-known scientifically technological (innovative) enterprises in exchange for a share of such enterprises property.

Among venture angel financing there are various typological kinds of angels. Corporate angels, angels-entrepreneurs, angels-enthusiasts, angels-micromanagers and professional angels are considered to be the main kinds. Business angels to reduce investment risks, that are especially typical of the early stages of venture enterprises development, can unite into syndicates and alliances of business angels. Angels'

provision of an active enterprise administration, giving of an additional free assistance and of consultations for business development are important for young venture enterprises.

Venture capital and investment funds, investment banking firms, venture capital companies, pension funds, insurance companies, large corporations, and banks make a formal market of the venture capital.

Test questions

1. Who are venture investors?
2. Whether the processes of venture financing by individual and institutional investors differ? Explain.
3. What kinds of business angels do you know?
4. Why are syndicates and alliances of business angels created?
5. Analyze advantages and drawbacks of financing of enterprises by means of business angels.
6. Who are venture capitalists?
7. What do venture investors' education, professional and business knowledge matter for development of venture enterprises?
8. Describe the typology of venture capitalists you know.
9. Tell about bright representatives of venture capitalists of both the past and present.
10. Describe the formal market of the venture capital and its main subjects.
11. What is the informal market of the venture capital? Name its main subjects.

3. OBJECTS OF VENTURE INNOVATION INFRASTRUCTURE

3.1. Venture capital funds

*Venture infrastructure objects*¹ – set of enterprises, organizations, establishments and their associations, associations of any form of property, rendering services to ensure risk (venture) activity.

Innovative enterprises throughout their development demand various volumes of financial, material, information and other resources and services to provide them. That is why at stages of life cycle of enterprise development the role and value of intermediaries and objects of the venture infrastructure changes.

3.1.1. Traditional interpretation of venture capital funds

By its function venture financing is investment of financial assets in exchange for a statutory fund share (holding of shares) of an enterprise for its fast development and growth. Venture investments are made by specialized *funds of the venture capital (venture capital funds)*.

In the literature there are different definitions of the term "venture capital fund" [84, pp. 411-416]:

1. *Venture capital fund* – undiversified institute of joint investment of the closed type, carrying out exclusively private distribution of securities of own issuance, more than 50% assets of which consist of the corporate rights and the securities that were not admitted to trading on the exchange or in information trading system [38].

2. *Venture capital fund* is an investor ensuring the mechanism of investment with formation of a mutual fund (usually partnership) for investment of financial capital, mainly of third-party investors in enterprises that are too risky for ordinary capital markets and bank loans.

3. *Venture capital fund* – institutional investor performing solely venture investment activity, connected with attraction of venture investors' funds to receive some profit on investment of these means into assets.

4. *Venture capital fund* is the fund initially focused on investment of means into non-marketable, high-risk, but potentially profitable and growable assets.

¹ Литвин И.В. Венчурная инфраструктура и ее роль в развитии малых инновационных предприятий. //И.В. Литвин //Менеджмент и предпринимательство в Украине: этапы становления и проблемы развития: весн. Нац. унив. «Львовская политехника». – 2009 - № 567-с.411-416.

5. *Venture capital fund* – fund created by the legal body in the form of joint-stock company for co-investment, the authorized capital stock is formed by funds, securities listed on the exchange or in official information trading systems, and real estate objects required to carry out of its statutory activities.

6. *Venture capital fund* is a fund, specialized in investment into new enterprises for which high yield and rather high risk level are typical.

7. *Venture capital fund* – financial organization which puts means into high-risk projects, capable to make significant profit in the uncertain future.

8. *Venture capital fund* is a private capital fund that invests in enterprises being at the early stages of development.

9. *Venture capital fund* – special contractual form of collective investment in the most highly remunerative sector of economy.

10. *Venture capital fund* – general pool of cash assets that is provided to companies managing the venture capital, and goes to crediting and financing of technical innovations, scientific researches and developments, introduction of inventions and launching of small innovative enterprises.

Having analyzed and having generalized the given definitions, it is possible to draw a conclusion: **venture capital funds** are specialized dependent or independent organizations of the venture capital which put financial resources for fast development of innovative enterprises, financing of their retrofit, technical reequipment and so on.

The assets of venture capital funds are formed on sharing or corporate basis. In world history they distinguish two models of the venture investment. According to the American model venture financing is connected with innovative technologies, in particular hi-tech branches. Therefore the traditional venture entrepreneurship assumes commercialization of exactly high tech scientific developments. Whereas the European model of venture investment allows financing various branches of industry which are not obligatory connected with innovative technologies.

From world practice it is known, that the important role in venture enterprises financing belongs to venture capital funds along with asset management companies. They finance stages of ventures which in comparison with the early stages of enterprise development demand the largest volumes of means: research sample, growth and expansion. Advantages of such financing to young innovative firms are the following: attraction of means through incorporating, allowing considering the attracted capital on the one hand as borrowed, and on the other – as its own, and that favors an effective use of their own means as much as possible; consultations and support on running of a company; organization of prediscovery throughout the venture project realization;

guarantees and recommendations to other potential investors of the following stages of financing; keeping business information confidential. Obstacles for financing of venture enterprises by means of venture capital funds is that that the majority of venture capital funds are specialized establishments that finance only particular industries which attractive to them; decision-making procedure on investment is prolonged, a lot of time is spent for company management check and appointment of new managers; concession of the significant holding of shares; increase of control over draft on funds by the management of such enterprise.

Investors of venture capital funds can be: banks, pension, insurance funds, large corporations, investment funds, governmental and international organizations, local authority. Such institutional investors, when creating a fund, address to AMC investment managers to run it for them and search for an innovation project (projects) to finance. Venture capital funds can be the legal body, and can be established without that registration in the form of association of members. The venture capital companies are legal bodies, organizations putting own means into perspective enterprises found by staff investment managers' efforts. However these companies can attract assets of other organizations and persons as well.

3.1.2. Classification of venture capital funds

Processes of creation of venture capital funds differ by methods of creation, financing volumes, areas of activity etc. There are the following classification signs and kinds of venture capital funds:

1. By the legal status they distinguish: legal and nonlegal (associations, divisions of companies, business banks etc.).
2. By the form of ownership they distinguish: private (individual – angels funds, family ones), collective (mutual, corporate), state, mixed.
3. By the right to dispose of means of such funds there are: those where AMC or venture capitalists have the right to dispose of assets of these funds; less funds where only the client of the fund can dispose of investment resources.
4. By creation terms they distinguish: interval (self-liquidating), non-interval funds (evergreen).
5. By the method of stock floatation there are funds: a) which shares are listed on stock exchange; b) which shares are not listed on stock exchange.
6. By purposes of creation: there are parallel, intermediate and main funds.
7. By foreign participation: there are national, foreign, mixed venture funds.

8. By spread of its support to enterprises and organizations of a country: there are nationwide (national), regional, international venture funds. Nationwide (national) ones are formed of means of the budget and state development funds. Regional ones, supporting certain regions of a country, - of means of local, regional budgets and extra-budgetary funds (grants). The international funds mainly act within the frameworks of international organizations programs. Funds with state participation are not often found.

9. By investment specialization: there are specialized (branch, theme), unspecialized (general) ones.

10. By venture investment models to which venture funds adhere there are: "traditional" and "nontraditional" ones.

11. By sources and origin of means: captive and semi-captive. Captive venture funds established by banks, investment banking firms, insurance companies, universities etc. for financing of investment projects which are of interest for parent company principal activity. Semi-captive venture funds – mixed funds of the venture capital whose investors can be external investors together with parent companies – initiators of venture projects.

In the Great Britain they distinguish kinds of venture funds and those of direct investment depending on financing kind and stage of venture enterprise development:

1. Funds of financing of early stages of enterprise development – *early stage funds*. They put means into young enterprises at the *early stage*, operating less than three years in the market.

2. Venture development funds – *development funds* – put their means into enterprises at the stage of *expansion*. These funds can create other funds of direct investment: *smaller buy-outs* and *buy-ins*, *mid-sized buy-outs* and *buy-ins*, *large buy-ins* and *buy-outs*.

3. Venture funds investing means in various stages of innovative enterprises development – *generalist funds*.

4. Venture funds, rendering services of bridge financing - bridge loans.

Besides, such classification sign also include funds of «seed» financing which put means into projects at the stage of framing of business development concept.

3.2. Asset Management Companies

The activity of venture ISIs is impossible without functioning of AMC that manage assets of such funds on the basis of the licence issued by the State Commission for Securities and Stock Market or by other similar structures.

Corporate venture capital fund assets are run by AMC on the basis of agreement on management of corporate investment fund assets concluded between AMC and the fund; and management of mutual venture fund assets - without such agreement (mutual venture fund is established on initiative of AMC, and assets of the former are transferred to management of the latter on the basis of legislation dictates).

The first, similar to modern ones, venture capital management company was financial partnership formed in the middle of the XXth century by US ambassador to the Great Britain J. H. Whitney – shareholder of the company "*American Research and Development*" among co-owners of which there was venture fund "*Venrock Associates*", established by the Rockefellers.

Asset Management Companies render the following services in the market:

- search for investors via announcements of placing of investment certificates of funds;
- working out of investment strategy of funds, formation of investment declarations of funds;
- formation (establishment) of venture capital funds, consultation of potential investors, assistance in selection of funds that mostly meet clients' expectations (by correlation of potential profitability and risks according to investment declarations of the funds run by AMC);
- search and improvement of investment proposals (projects) of enterprises, negotiations and study of entrepreneurs' personal qualities, analysis of management team of the potential recipient-enterprise of the venture capital;
- detailed study of investment proposals, risk identification of investment activity, working out of actions directed to minimize them;
- examination and prediction of possible incomes of a fund, of payback period of investments for each project, changes of cost of investments regarding each project;
- strategic corporate administration of the invested enterprises, advisory support of the enterprises, in particular concerning directions, search for possibilities of development of the enterprises, marketing researches of the markets etc.;
- selection of necessary cadres for enterprises;

- working out of medium-term plans for development of the invested enterprises, control and regulation of financial activity of venture fund enterprises, a constant analysis of the reports of invested enterprises;
- looking for exit strategy and organization of the exit itself of venture investors investment projects.

3.3. Objects of innovation infrastructure and their place in formation of scientific and technological clusters

3.3.1. Incubators

Considering early stages of development of ventures, it is expedient to pay attention to venture infrastructure subjects - incubators. They need to be investigated from the point of view of those services which they render to venture enterprises.

According to definition of the National Business Incubation Association (NBIA), business incubation is a dynamic process of enterprise development. Incubators nurture young companies, helping them survive and expand during the start-up period, when they are most vulnerable. Incubators provide management guidance, access to financing, important business services as well as give a technical assistance.

Business incubator is the organization which accelerates and systematizes process of creation of successful enterprises, providing them with a broad and integrated spectrum of support, including incubator premises, supporting business services, and also possibilities for combining in clusters and networks. Rendering services to clients according to the principle "buying various services at one place under one roof" and enabling to reduce overhead charges by division of expenses, incubators considerably improve prospects of new enterprises to survive and grow.

They also call *incubators* the organizations which accelerate development process of young innovative enterprises, provide access to their financial, tangible and intangible assets as a result of fulfilment of various office, information, and consulting, technical services [5].

The first incubators were established in the early 70s of the XXth century in the USA. Evolution of services offered by the then incubators, took place as follows: at first they provided rental services of cheap premises, office services to all young enterprises needed support, and since the 90s business incubators started to render additional services. These are advisory, in particular, consulting services, realization of trainings

on doing business, network services regarding access to external professional services of other organizations and information support, adjustment of communications with potential investors, including venture capitalists, for seed financing of venture activity. Since 1998 specialized incubators began to emerge comprehensively supporting mainly high-tech innovative enterprises at the start-up stages of their development. The largest quantity of business incubators is concentrated in North America, in particular in the USA, in Western Europe.

Typical incubators provide the following types of service:

- office services, including technical and administrative ones: rent of premises, equipment and office equipment at reduced tariffs, office secretary services;
- economic and business services: help of managers in running of an enterprise (organization of business and fiscal accounting, management accounts, activity financial planning);
- information and advisory services, technical expert examination of innovation projects, marketing researches of outlets, evaluation of innovation and market potentials of an innovation project etc.;
- financial services, including investment credits on favourable terms;
- investment services: search for potential investors of a venture project, project business plan preparation, assistance and training of entrepreneurs to negotiate and present projects to potential investors, recommendations to investors of an enterprise;
- training and educational and employment services: trainings, practical seminars on management, courses of retraining and so on;
- services at later stages of enterprise development: search for partners abroad for production export, analysis of foreign outlets and revealing of possibilities of growth and enterprise development.

There are the following advantages of cooperation of a venture enterprise with incubators:

- precise selection of the enterprises based on innovation projects with high market and innovation potentials of growth of such enterprises that allows them to refuse unsuitable projects for commercial realization at the start-up stages of their life cycle;
- professional qualified support of managers, their experience, business connections, partners' reputation;
- rendering of various services to support business at tariffs lower than market ones;

- access to information resources of the incubator, use of databases of associations of incubators, engagement in trainings, seminars on entrepreneurship development according to programs of international partnership and information cooperation;
- support of the early stages of enterprise development with a possible continuation of cooperation at later stages of life cycle of the enterprise;
- investors' trust in a project is increased because of possibility of investment of means of a business incubator in the enterprise;
- search, attraction and giving of recommendations to potential investors after exiting the incubator;
- broad geographical orientation of incubators, their membership in the international associations of similar organizations expand entrepreneur's access to global, national networks of formal and informal sectors of the venture capital;
- possibility of attraction of external organizations and rendering of competitive services to enterprises by using outsourcing;
- well-organized business connections of the incubator, constant contacts with investors of both formal and informal sectors of the venture capital reduce the time it takes for an entrepreneur to search for funding sources and negotiations with venture capitalists.

There are the following drawbacks of such cooperation:

- territorial and branch principle of selection of enterprises;
- territorial remoteness of the enterprises from the site of incubators;
- probability of reception of poor-quality services, mismatch of consultations with real market conditions of business dealing; insufficient market orientation of researches by incubator experts does not evoke venture capitalists' trust; differences between potential investors' expectations from the presentation of investment project and methods, conditions of formation by incubator managers;
- urgent nature of cooperation of a venture enterprise with incubators due to conditions of agreements. Usually incubators put forward as the termination criterion of cooperation agreement with the entrepreneur the approach of 2-3-year term of stay in the incubator, instead of transition of the enterprise to later stages of its development;
- divergence of the mission and purposes of incubator managers and a venture entrepreneur concerning possibilities of development of the enterprise and criteria of its success. Usually unprofitable state incubators are created to provide a sustainable development of depressive regions by ensuring conditions of growth of jobs and unemployment decrease, and not to increase in profitability of fast-growing organizations owing to realization of progressive innovation projects.

Business incubators can co-operate with local government, scientific institutions and higher educational establishments, financial institutions, organizations that unite entrepreneurs, investors. All these organizations support an incubator and may render necessary services to venture enterprises.

Criteria of selection of enterprises for incubators are: a geographical position of enterprises, state and quality of organization of business, high innovation and market potentials of growth of such enterprises, interest in production of a young enterprise by business partners of the incubator, possibility to obtain mutual benefits from cooperation and get synergetic effects.

Kinds of incubators. In 1997 the Organization for Economic Co-operation and Development (OECD) offered typology (classification) of incubators on the basis of the dominating purpose and characteristic of client firms:

General incubators. They speed up and promote a sustainable regional industrial and economic development, support overall entrepreneurship development by performing various kinds of activity.

Economic development incubators. The aim of their activity is to achieve certain objectives of economic development, initiated by local governments: job creation, industrial restructuring. They give a general support of all enterprises to increase employment of the population, stimulate creation of new enterprises.

Technology incubators. They promote development of young innovative technology-based firms, speed up commercialization of innovations, and stimulate activity of enterprise activity among developers, research scientists and inventors.

Evolution of forms of development of business incubators in the world predetermines spreading of various kinds of such organizations by classification signs:

1. By the form of property there are private, state and mixed ones.
2. By orientation to gain profit – profitable and unprofitable organizations.
3. By regional distribution of their activity – regional, national, international ones.
4. By services rendered:
 - incubators, rendering services only at the start-up stages of enterprises development; providing support before as well as after an enterprise changes its location outside of incubator walls;
 - rendering only internal services; doing both internal and external services (outsourcing).
5. By possibility of cooperation between incubators and venture capitalists – those that co-operate, and those that have no such contacts and do not establish them.

3.3.2. Technological cluster formations

Industrial parks. For the purpose of convergence of industrial production and science, market validity of scientific developments of products, reduction of terms of market launch of such products technological cluster formations are created. They include industrial park and business structures: industrial parks, scientific and technological centers, science parks, research and industrial parks, business centers and complexes, business parks, innovation centers and so forth. Although the majority of them have different names nevertheless they perform the same tasks - assistance to development of regions thanks to active usage of scientifically technological potential of regions, to development of innovative venture entrepreneurship and high-tech branches of country economy. In different countries technological cluster formations as well as various kinds of such structures are created in a particular way owing to one or another mental, historical, legislatively-legal circumstances.

Let us consider the main kinds of technologically focused formations acting to integrate processes of creation, production and distribution of production of high-tech branches.

Industrial park (science park) – science-based production territorial complex which includes research institutes, laboratories, experimental factories with advanced technology. They are formed on territories, prepared in advance, around large universities with the developed infrastructure that includes: laboratory buildings, multipurpose industrial premises; shared data-processing centers; systems of transport and other communications; shops; living quarters; service and exhibition complexes [55].

Such complexes are usually created in picturesque park landscape zones that promote formation of favorable conditions for scientific and creative activity, development of innovation processes. The fact that material and technical basis necessary for research and industrial activity is nearby favors faster realization of innovation projects.

There are peculiarities of industrial parks activity:

- coordination of activity and cooperation of subjects of innovation processes of the main links – science, higher school, public sector of manufacturing, private companies and regional urban administration bodies;
- acceleration of processes of transfer of scientific and technical knowledge, acquired during fundamental and applied scientific researches, to production;

- innovative entrepreneurship development; attraction of industrial and bank financial resources to the innovative sphere;
- concentration and usage of risk capital;
- creation of preferential treatments for new objects.

The main advantages of science parks are:

- integration of various stages of the innovation process;
- concentration of financial institutions focused on investment in high technology projects (associations of individual investors, venture capital companies, investment companies etc.);
- simplification of communication process between subjects of innovation processes – scientific workers offering their inventions and industrial enterprises, willing to manufacture and market them;
- reduction of terms of introduction and diffusion of innovations;
- creation of necessary conditions and possibilities for scientific market-focused production activity;
- concentration of organizations rendering financial, information, technological and other services, necessary for new technologies development;
- support of processes of training of young experts and scientists for acquisition of practical skills using industrial park material and technical basis;
- bringing of quality of educational services given to students to requirements or requests of employers [10, pp. 42-48; 55].

The well-known among them are: Stanford Research Park (USA) created at Stanford University, Sophia Antipolis (France), Cambridge industrial park, industrial parks Hsinchu (Taiwan), Shen Zhen (China), Tsukuba Science City (Japan) and many other parks situated in different countries of the world.

Technopolises are cities of the advanced (high) technologies, scientific researches and R&D developments in corresponding branches of production; integral scientific production complexes created on the basis of some cities.

The idea to create technopolises as compact scientifically-industrial cities, where they develop innovative technologies and science-intensive branches of production are developed, emerged as far back as the early 50s of the XIXth century in the USA. The sample of both range and successful work is Stanford technopolis – Silicon Valley. Evolution of establishment of Stanford Research Park was prolonged and its main stages were the following [55]:

First stage. An industrialist (former governor of California and a railway magnate) Leland Stanford (1824-1893) and his wife Jane founded, in 1885 near Palo Alto,

California, a university to develop an entrepreneurial activity. The university was named after their son, Leland Stanford, Jr, who died of typhus in 1884 two months prior to his 16th anniversary. The university was established as nonconfessional and coeducational institution. Up to the 30s of the XXth century tuition was free. The university is located in Silicon Valley, and its alumni later on established such companies, as Hewlett-Packard, Electronic Arts, Sun Microsystems, Nvidia, Yahoo!, Cisco Systems, Silicon Graphics and Google.

At present the university consists of Business School, Law School, as well as Medicine and Engineering schools. Thanks to its academic reputation and a lot of prominent graduates it is one of the most prestigious universities of North America and is widely known outside of the USA. It takes leading places in the Academic Ranking of World Universities.

The university faced serious financial straits after the death of Leland Stanford in 1893 and after the significant part of a campus was damaged by the 1906 San Francisco earthquake.

Second stage. A physicist Cyril Elwell (Cyril Frank Elwell, 1884-1963), a graduate from Stanford, obtained the patent on radio transmitting technology and created a private enterprise on the basis of the university (the Federal Telegraph Company, 1909) Throughout next decade his company (FTC) has been creating the first-ever global radio network, and has signed the contract with the US Navy.

Third stage. One of the university alumni Herbert Hoover (Herbert Clark Hoover, 1874-1964), later on – 31st US President, in 1919 became the founder of the Hoover Institution (Hoover Institution on War, Revolution, and Peace). The institute was supported materially and politically by government organizations and enterprises. The Hoover Institution was founded as a library of materials dealing with World War I. In due course the library has turned into an important research center concerning itself with long-term analytical programs in the area of policy and economy.

Fourth stage. Origin of Stanford Industrial Park (1936-1940) Creation of industrial enterprises to manufacture telephone sets, radio engineering products. The university placed at enterprises disposal premises, the equipment for working out of light bulbs to order of industrial firms.

Fifth stage. Emergence in 1946 of the Stanford Industrial Park, opening at the university a research institute, which received large military contracts for researches in the field of electronics.

After World War II amount of students in Stanford sharply increased and there arose needs for additional finances. The university possessed a large plot of land which

it had no right to sell (according to last will of the university founder Leland Stanford). In such situation Dean of Engineering School, Professor Frederick Terman offered to lease the land to be used as an office park.

Stanford alumni got a chance to find a job in immediate proximity to Alma mater; problems of companies connected with finding of highly skilled specialists were solved as well.

Sixth stage. Strengthening co-operative connections of Stanford Research Park and the industrial sector. The number of scientific organizations and industrial enterprises operating within the center grows.

Seventh stage. Silicon Valley (1970-1980) is being formed, there are new scientific and scientific and technical centers, industrial parks, consulting firms, design offices, laboratories where thousands scientists, designers, engineers are involved. In Silicon Valley a great deal of venture firms is in operation, total number of their employees makes up more than 200 tsd people. That is how the world's largest technopolis was established.

Technopolis is a specialized territorially closed science and production complex where research activities, science-intensive production and training of scientific, engineering and working personnel necessary for functioning of such complex are merged as a whole. In other words, it is the special form of territorial integration of science, manufacturing and education. Technopolis, with regard to literal meaning of this word (from Gr. *techne* - skill and *polis* - city) represents a compact city specializing in development and manufacturing of advanced technology products, single science and production, educational, residential and cultural and community zone, united round a scientific center, ensuring a continuous innovation cycle based on scientific researches. «Critical mass» of science, science-intensive business and education generated in such a city causes «chain reaction» of scientific and business activity of international, global scale.

The structure of technopolises includes industrial parks with universities, scientific centers and institutes, incubators, university spin companies, industrial enterprises, engineering, consulting firms, financial subjects of entrepreneurship (venture capital funds, companies of the venture capital, investment banking firms, networks of individual investors etc.), objects of industrial and infrastructural purpose, those of sociocultural purpose et al.

The placement of technopolises should meet certain requirements. For example, the industrial park should be situated in regions which can be used for development of science-intensive industries, there, where there is a possibility of development of a

corresponding production and municipal infrastructure, of creation of a research and financial infrastructure of a region. The industrial direction of the region should coincide with that of technopolis development, legal support of technopolis functioning should agree with the legislative sphere of a region, with possibilities to give system of preferences for technopolis development. The main requirement – activities of universities and research institutes that must ensure realization and coordination of scientific developments, as well as training of highly skilled personnel.

Besides Silicon Valley, the largest technopolises as for quantity of created venture enterprises globally are "*Silicon Fen*" (Cambridge, the Great Britain), "*Tel Aviv*" (Tel Aviv, Israel), "*SE England*" (Southeast England), "*Oxford*" (Oxford, the Great Britain), "*London*" (London, the Great Britain) and so on. [12; 96].

Universities located in technological clusters and adhere to entrepreneurial principles while performing their activity, being active participants of process of venture enterprises creation. Universities of the USA are considered as the most successful educational institutions concerning organization and support of both venture *spin-outs* and *spin-offs*: *Stanford University*, *University of Wisconsin (Madison)*, *University of Washington (Seattle)*, *Southampton University*. They are top-ranked as for venture capital volumes attracted by academic science area. The most well-known university *spin-out* companies in the world - "*Google*", "*Sun Microsystems*", "*Yahoo*" (spins of Stanford University) [87, p. 98].

Area of distribution of technopolises is large-scale – they are created in Western Europe, North America, and Northeast Asia etc. By signs of functional organization industrial parks (USA, France, Great Britain, Ireland, Finland, Sweden, Spain); science parks (USA, Finland, Denmark, Netherlands, Great Britain, Belgium, Japan, Taiwan); research and industrial parks (USA, Great Britain); club parks and business complexes (France), business parks (Great Britain); innovation centers (Great Britain, Germany, France) are similar to them. In the USA technopolises are created in more than one half of the states.

Technopolises were intensively developing in Japan where the special program "Technopolis" was drawn up. It was coordinated with nationwide programs to create science-intensive branches, essentially new technologies, programs of encouragement of small research entrepreneurship, development of small venture firms, and national plan of regional development. The program stipulates formation of Japan-wide information network and international unions in the sphere of scientific and technical activities.

The program backbone is a plan to construct 19 technopolises combined in one system by a traditional "industrial corridor" Tokyo – Nagaya – Osaka – Kobe via a high-

speed transport (railway) together with a uniform information network which ensures free access for all interested innovative entrepreneurship subjects of Japan to an integrated database. This direction of development strategy Japan virtually fully adopted from the USA.

Technopolises can arise on the basis of new as well old, reconstructed cities. Technopolises positively influence development of those regions where they are situated and favor:

- increase in innovative activity of the population;
- innovation infrastructure formation in a region;
- acceleration of innovations commercialization;
- structural production reorganization of a region;
- creation of new jobs;
- improvement of controlling mechanisms and financing ones of innovative activity;
- increase in science intensity of development of region branches of industry;
- advanced training of scientific manpower, instructors of higher education establishments of a region et al.;
- development of innovation-focused economy or knowledge economy.

So, venture infrastructure objects – set of enterprises, organizations, establishments and their associations, associations of any form of property, rendering services to ensure risk (venture) activity. Venture infrastructure objects include venture capital funds which can act as share or corporative institutions of joint investment (ISI), asset management companies of venture ISIs, incubators, industrial park structures (industrial parks, technopolises) and so forth.

In some post-Soviet countries venture capital funds are specific institutes of joint investment, in particular these are undiversified institutes of closed-end joint investment that carry out exclusively private distribution of securities of its own issuance, more than 50% of assets consist of the corporate rights and securities not admitted to trading on the exchange or in information trading system. Existing venture ISIs can be of two kinds: 1) mutual venture funds, being no legal entities, functioning due to the assets belonging to investors as joint ownership in common. They are subordinate to asset management company and are considered by the latter separately from results of its economic activities; 2) corporate venture capital funds as a legal entity, created in the form of open joint-stock companies performing only co-investment activity.

Asset management companies (AMC) – legal entities carrying out asset management activity on the basis of the corresponding licence, issued by the State Commission (or some other similar organization) on Securities and the Stock Market.

For support of young ventures business incubators matter a lot - they are organizations that speed up development process of young innovative enterprises, giving access to their financial, tangible and intangible assets, and also performing various office, information, consulting and technical services.

Summing up the aforementioned, we will notice, that an important factor of accelerated venture entrepreneurship development is a concentrated placement of venture infrastructure objects on one territory. It is clusterization of small innovation and technology firms, scientific institutions, industrial enterprises, venture innovative intermediaries and finance and credit institutions on one territory that favors at support of state government bodies quality selection, fast commercialization of innovative solutions.

Test questions and tasks

1. Define “venture entrepreneurship infrastructure” concept.
2. What structures are labeled as innovative intermediaries?
3. Describe the incubator.
4. Name the kinds of incubators according to signs of the dominating purpose and peculiarities of client firms.
5. Why are economic development incubators created?
6. Consider “venture capital funds” concept.
7. What do you know about venture financing? What are peculiarities of enterprises financing using the venture capital?
8. Tell about the organizations occupying themselves with asset management of venture capital funds.
9. What types of institutes of joint investment do you know?
10. Analyze the types of venture institutes of joint investment that can be created in the Kazakhstan market.
11. What is the Asset Management Company?
12. Name the basic services rendered by asset management companies in the domestic investment market.
13. Describe the institutes of joint investment.

14. Enumerate the sources of formation of assets of venture capital funds.
15. What is the role of universities of Western Europe and America in innovative entrepreneurship support?
16. Explain the differences among industrial parks, scientific and technical centers and technopolises.
17. Tell about the most powerful scientific and technological cluster associations in the world.
18. What are the special features of stock floatation by venture mutual and corporate investment funds?

4. VENTURE ENTERPRISES

4.1. Classification of kinds of venture enterprises

Important venture entrepreneurship subjects which concern themselves with scientific developments and their direct commercialization on the basis of the venture capital, include venture enterprises. Among venture practitioners such enterprises are called ones that received the venture capital, or ventures. These names reflect a synonymic line of "venture enterprises" concept.

Venture enterprises – these are young innovative enterprises, isolated divisions or subsidiaries of large companies, scientific and technical associations of enterprises which have potential of growth and attract the venture capital to realize innovation projects, modernize and/or refit enterprises technically, and launch new products (works, services), that favors substantial growth of market values of the invested enterprises.

Throughout the history of venture entrepreneurship development various schemes of venture financing have being used. Every case of financing of enterprises using the venture capital was uncommon and unlike any other in many respects. Considering that, it is possible to single out classification signs and kinds of venture enterprises [38; 102; 115; 117; 122]. There are *classification signs according to*:

1) way of creation and funding sources: internal ventures: risk groups, divisions; university and corporate ventures like *spin-off* and *spin-out*; external ventures, "independent" ("pure") ventures;

2) form of organization of innovative activity: intracompany – interfirm cooperation; integration cooperation; extra-integration organization;

3) content of innovations (kind of scientific and technical production): enterprises developing product innovations, technological innovations (of process), administrative (market) ones;

4) degree of novelty which an enterprise gets: basic innovations; improving innovations; pseudo-innovations;

5) specialization degree: enterprises focused on certain kinds of scientific and technical production; diversified enterprises;

6) kind of enterprise specialization: commodity (product); administrative (resource); technological ones;

7) stage, where there are innovative solution of an enterprise: novelty occurrence; consolidation and innovation growth; innovation maturity;

8) stage of enterprise development when venture investments were received: seed financing (stage of *seed* financing); being at the initial stage (stage of *start-up* financing); expanded financing (stage of *expansion*);

9) kind of association, venture enterprises are part of: corporations; scientific and technical alliances (venture strategic alliances – VSA); consortia; concerns; holdings; financial and industrial groups; scientific and technical clusters;

10) investment prospects (innovation potential): “low-potential” ventures, “average-potential”, “high-potential” venture enterprises;

11) kind of organizational structure of innovative activity management: matrix; project; target and program; network; linear; mixed;

12) foreign participation: national; mixed; foreign;

13) type of investors participating in venture financing process: enterprises backed by individual investors; institutional investors; individual and institutional investors;

14) number of employees: small, medium-sized, large;

15) form of financing (enterprises that have received financial resources through): direct cash investments in joint-stock (share capital); issuance of debt instruments, other forms of financing (bank, crediting against commodities, factoring); mixed financing;

16) degree of attraction of investors to venture enterprise running: with a passive participation of investors (capitalists) in its management (*hands-off management*); with an active one (*hands-on management*); combination of the mentioned approaches to administration;

17) quantity of rounds of venture financing: enterprises that receive financial resources at: one round, two-three; four-six; seven and more rounds;

18) approaches to formation of structure of venture enterprise capital (issuing): equities for all investor categories; privileged shares for institutional investors and venture capitalists and equities for individual investors and founders; privileged shares and equities for institutional investors and venture capitalists coupled with equities for individual investors and founders;

19) way of investors’ exit a venture enterprise (their investors exit by): direct sale of their stakes to strategic investors – *trade sale*; public or private floatation of shares; repayment of shares in business by entrepreneurs (founders, trust of managers) - *management buy-out* (MBO); sale of shares of the property to other investors (individual or institutional ones) for capital replacement – *management buy-in* (MBI); closing down of such enterprises, sale of assets and writing off of debts; combination of variants of exit at different stages of financing;

20) kinds of securities used by enterprises while attracting investments:

- enterprises using securities that reflect the property rights of investors – equities; privileged shares. They in their turn are divided into shareholders
 - without the right to take part in distribution of funds, left after payment of n -fold liquidation preference (*nonparticipating preferred*);
 - who fully participate in distribution of funds, left after payment of n -fold liquidation preference (*fullyparticipating preferred*);
 - with limited n -fold participation (*participated preferred subject to a cap*);
- enterprises which combine equities and privileged shares for various categories of investors;
- enterprises that use: short-term debt securities - bridge notes, convertible bridge note; derivative securities (call and put options, warrants and so on); various combinations of securities.

21) state participation in the property of enterprises: enterprises with a government stake in ownership; enterprises without the state share of the property;

22) kind of economic company: private companies – joint-stock and nonstock (close corporations, limited companies); public companies (public corporations).

In the first place it is necessary to consider kinds of venture enterprises by way of creation and funding sources. These signs are related to the main ones since they help to generalize basic kinds of venture enterprises depending on schemes of venture financing used for their creation: internal, external or traditional.

4.2. Kinds of ventures by way of creation and funding sources

By way of creation and funding sources, as was already mentioned, they distinguish:

- internal ventures (risk groups, divisions; university and corporate ventures like *spin-off* and *spin-out*);
- external ventures;
- "independent" ("pure") ventures.

The analysis of the researches dealing with issues of classification of kinds of venture enterprises, enables to confirm about ambiguity of opinions concerning how to divide venture organizations. By the classification sign of funding sources, they distinguish, for example, such kinds of venture organizations as: internal, "independent", external and implementation [38; 102; 115; 117; 122]. However careful study of the issue of financing of innovations and research of organizational forms, stages of life

cycle of development of innovative, including venture enterprises, allows drawing a conclusion that such classification sign is inaccurate. As each innovative enterprise in the course of realization of venture innovation projects can attract various funding sources, then quantity of them, amount of financing depend on a concrete case. There are virtually no enterprises that attract the single funding source to carry out their venture projects. For too risk activity such approach is extrinsic, therefore throughout various stages of life cycle of development venture enterprises can simultaneously be financed by venture capital funds, be in contract relations within the scope of venture strategic alliances or joint integration associations. In the course of project realization innovative enterprises can be backed according to different venture schemes. Because of that the authors have specified the classification sign. Hence, it is better to be formalized by way of creation and funding sources and so distinguish ventures: internal (risk groups, divisions, university and corporate ones like *spin-off* and *spin-out*); external; "independent" ("pure").

Internal ventures are temporary or constantly operating divisions of large industrial companies which receive the venture capital from venture capital funds established within them and are intended for selection and realization of perspective, from commercial point of view, production ideas, their developments and introduction. Financing of internal ventures is carried out due to main activity of a company using its special funds.

Risk groups and departments of companies are some sort of rudimentary evolutionary forms of "traditional" ventures. Despite contradictions regarding risk departments belonging to ventures, because they attract the venture capital in its narrower sense, but can ensure the rights of investors' participation in the property of potential enterprise created from employees of risk department, there is a proposal to label them as internal ventures. They may include new enterprises formed as a result of inventor-employees' separation from a parent company. Such enterprises can emerge by way of turning of rather independent internal risk groups into *spin-off* and *spin-out* companies et al. [25].

Spin-off – a new subsidiary established as a result of separation of large company employees for a commercial use of results of know-how and technologies, received and developed on the basis of a parent company. Enjoying the status of an independent legal unit, it can use parent firm resources. *Spin-off* is more independent from a parent company concerning innovative searches and solutions as it can make researches in directions, different from parent company main activity. *Spin-off* and *spin-out* create bases of internal venture entrepreneurship within frameworks of a parent company [25].

Spin-out – a new enterprise established by inventor-employees of a parent company that by means of concluded intracorporate agreements has the right to use intellectual and material and manufacturing resources of such company, remaining rather independent in its innovative-creative activity. Such enterprise is financially and operationally subordinated, but gets legal, financial and accounting support, access to results of marketing researches of a parent company and its sales channels. *Spin-outs* provide large enterprises with new products development, increase market capitalization of such enterprises. Sometimes these companies are related to corporate strategy of parent company development, directions of its innovative researches.

External ventures are complex integration and cooperation structures, formed on the basis of privity of contract among independent entrepreneurship subjects to combine financial, labor, information, material and other resources, for joint realization of separate stages of innovation projects in order to commercialize innovations. They are established by one or several large corporations as intercompany research institutes, scientific and technical alliances, research consortia and joint enterprises. An external venture operates by founders' order and is structured in several modifications organizationally registered as research consortia, venture strategic alliances, innovative clusters et al.

As shows the literature analysis, external ventures as research consortia created in order to: make fundamental long-term researches; stir up activity of research institutes, universities on their production basis with the use of existing science and production potential; working out of branch standards, technical specifications and control over their use – these external ventures created by corporations of one branch on a sharing basis [12, p. 97; 38, p. 172; 102, p. 287; 124, p. 91].

External ventures may be formed on initiative of scientists and inventors of large companies as subsidiaries or branches with own science and production cycle of innovation adoption who combine efforts in the form of cooperation contract relations. Such ventures provide for innovative enterprises to be part of joint integration associations (venture innovative structures) - associations of research establishments, financial institutions, commercial enterprises, government bodies to ensure process of creation and commercialization of results of scientific researches and developments, to carry out innovation projects.

"Independent" ventures – small innovative enterprises that have know-how or developed designs of new products, have significant potentials of growth, receive the venture capital from private investors as well as professional venture capital funds (venture capital companies) in exchange for a part of property (usually less than

controlling interest) of such enterprises, which become not only direct investors, but also strategic business partners interested in fast accretion of cost of these enterprises through their participation in realization of projects and commercialization of innovative products.

We consider the concept "independent" ventures rather contradictory as for its name since a venture enterprise is relatively independent at the early stages of its development when a significant control over the property of such enterprise and administrative process belong to its founders – inventors. The following stage of venture enterprise development – possibility to attract means of professional funds of the venture capital at the stage of venture financing. In this case, depending on quantity of rounds of such financing, founders lose a significant share of the property (controlling interest) of such enterprise, and administrative functions concentrate in venture capitalists.

4.3. Forms and kinds of venture entrepreneurship

As was already mentioned, *by the form of organization of innovative activity* they distinguish the following ventures:

- of in-house organization;
- of intercompany cooperation;
- of integration organization;
- of extra-integration organization.

The in-house organization is creation of temporary or constantly operating divisions of large industrial corporations, as well as self-contained divisions of companies as subsidiaries (*spin-off*), intended for selection and financing of prospective, from a commercial viewpoint, production ideas. The intercompany cooperation plans joint research works for the purpose of innovation projects realization. Such cooperation includes branch intercompany research institutes, scientific and technical (VSA) alliances of companies, consortia and joint enterprises. The integration organization provides for joint integration associations (venture innovative structures) – scientific and technical clusters, that is scientific and technological centers, industrial parks and technopolises.

O.E. Kuzmin and I.V. Lytvyn have developed the classification of main forms of venture entrepreneurship *depending on sources and ways of financing* (table 4.1).

By innovation content (kind of scientific and technical production) they distinguish enterprises developing:

- product innovations (production and introduction of new improved products in sphere of manufacturing or in that of consumption);

Table 4.1.

Forms of venture entrepreneurship

Organization forms of innovative venture activity.	Main funding sources
Internal ventures	
In-house organization	
Temporary rather independent RD departments*	Fixed assets of companies, savings of department employees
Autonomous RD departments*	Special intracorporate funds of companies, savings of department employees
New enterprises (<i>spin-off</i> and <i>spin-out</i>) with their own science and production cycle of new product adoption within frameworks of a parent company	Direct payments of venture capital funds, individual investors, donor financing of parent companies, means of inventors, grants, sponsors' fees
External ventures	
Intercompany organization (cooperation)	
Scientific and technical alliances of companies	Means of companies of various kinds and branches of industry, of universities, those of state and local budgets, including under programs of scientific and technical development
Research consortia	Temporary statutory pooling of means of enterprises of various forms of property, profile, size; funds of state and local budgets
Technologically focused joint enterprises	Medium-term joining of capital of enterprise participants
Integration organization	
Scientific and technical clusters	Long-term pooling of the capital of participants, means of the state structures, local authorities, scientific institutions
"Pure" ("independent") ventures	
Extra-integration organization	
Innovation and technology firms	Means of private individual investors (including founders' own means), bank credits, funds of institutional investors (investment funds, venture capital funds, companies of the venture capital, investment banking firms), partially state subventions, grants

Note. Forms that individual researchers label as pre-venture organizational formations are marked by *.

- process innovations (new techniques of products manufacturing, organization of production);

- market innovations (finding new areas of application of products or assistance in sales of a product or service in new markets).

By degree of novelty a venture enterprise gets, they distinguish enterprises obtaining:

- basic innovations (open new methods of production of already existing or previously unknown product, promoting development and emergence of a new branch of economy);

- improving innovations (improve basic innovations, allow spreading and improve base generations of technical equipment, to improve parameters of manufactured production);

- pseudo-innovations (continue life cycle of an improving innovation by change of design, material of which products are manufactured).

According to specialization degree they distinguish:

- specialized venture enterprises (development and commercialization of a certain kind of scientific and technical production);

- diversified venture enterprises (development and commercialization of various kinds of scientific and technical production in order to lower risks of failures of one of the projects and to cover losses at the expense of successful innovation venture projects).

According to the kind of association venture enterprises become a part of:

- corporations (contractual association created on the basis of combination of production, scientific and commercial interests of the united enterprises, with delegation of some authorities of the centralized regulation of activity of each of the participants to corporation controls; is formed by enterprises of various forms of property on contract basis);

- scientific and technical alliances (venture strategic alliances) - contractual associations of several enterprises with universities, state laboratories on the basis of the agreement on joint financing of R&D, development or modernization of products;

- consortia – temporary statutory associations (industrial and banking capital for realization of certain projects or programs) of enterprises for achievement by its participants of the certain common economic goal; consortium uses means given by the participants, centralized resources, allocated for financing of the corresponding program, and the means coming from other sources in the manner, specified by its Charter;

- concerns (statutory associations of enterprises, as well as other organizations on the basis of their financial dependence on one or group of participants of association, with centralization of functions of scientific and technical and production development, investment, financial, foreign-economic and other activities; participants of the concern transfer a part of their authorities to it, including the right to represent their interests in relations with government bodies, other enterprises and organizations).

By investment prospects (innovation potential) there are:

- "low-potential venture enterprises" (enterprises for the venture capital (*life-stale*) which profit for 5 years is less than US\$ 50 mln; such enterprises do not attract venture investors, such enterprises account for 90% of all ventures in the market);

- "middle-market ventures" (*middle-market*), which profit varies US\$ 10 to US\$ 50 mln annually. It is such enterprises that require venture capital participation;

- "high-potential enterprises" (*high-potential*), they have more than US\$ 50 mln of annual profit within at least 5 years and are most attractive to venture investors; these are enterprises mainly with corporate ownership and they make 1% of total number of innovative enterprises [50].

By the form of organizational structure of management (OSM) of innovative activity they distinguish venture enterprises with the following OSM:

- linear;

- matrix (members of a project group are subordinated to both a project manager and heads of those functional divisions where they actually work; that provides for coordination of actions for realization of several innovation projects);

- project (used to carry out innovation projects within the frameworks of mechanistic organizational structures of management);

- target program (for implementation of innovative development program, at that at every stage of the program the place and role of management for its head changes depending on goals and tasks at each stage);

- network (constructed by a principle of economic-organizing isolation of certain stages of engineering procedure, that increases optimality of its realization thanks to attraction of executors carrying out a stage of process in the best way [38, p. 167]);

- virtual (provide for creation of small coordination centers of venture activity control within the limits of external ventures – venture strategic alliances).

By completeness of inclusion of stages of innovation process (science – engineering – production) there are organizations which have begun their work on innovative products:

- from basic research;

- from applied research;
- at the stage of experimental design and research and development (exploratory developments);
- at the stage of innovation commercialization.

Those enterprises that have begun work on innovative products with basic research carry out an entire innovation project embracing all stages of innovation process from basic research to sale of an innovative product. All other enterprises supposed to carry out partial projects that are separate stages of innovation process.

By the stage of innovative solution, there are enterprises at that of:

- novelty emergence (there is an engineering procedure adjustment, pilot lot manufacture and its market appraisal, formation of strategy and sales channels);
- consolidation and growth of innovation (period of quick perception of a new product by the market and fast growth of profits);
- innovation maturity (product ceases to be a novelty, at this stage innovation life cycle is virtually over).

By the degree of foreign venture capital participation they distinguish:

- national venture enterprises (created exclusively by residents or national legal entities);
- venture enterprises using foreign investments (enterprises which collective investment fund contains not less than 10% of foreign investment);
- foreign venture enterprises (legal organizational form of an enterprise located on the territory of Kazakhstan and created as the subject of law, according to the foreign state legislation; its property – total ownership of foreign citizens, legal entities or state; such enterprises operate only on the basis of the property of foreigners or foreign legal persons; a functioning enterprise of which these persons become owners).

A long-term experience of ventures development in the USA and Europe has shown that enterprises can use various schemes of venture financing. Ways and forms of venture financing, peculiarities, conditions, quantity and structure of venture investors entering the invested enterprise, provide for formation of various kinds of ventures. According to venture business practitioners, there are as many venture enterprises and possibilities for them to attract the venture capital, as there are kinds of ventures. There are virtually no venture enterprises which would use the same or identical schemes of venture financing. Various venture enterprises need to be considered as particular cases of venture investment. In spite of that, the authors of the teaching manual tried to identify basic classification signs by which it would be possible to single out the most typical kinds of venture enterprises. Basic signs of classification of venture enterprises

include signs according to way of creation and funding sources, form of innovative activity organization, innovation content (kind of scientific and technical production), degree of novelty got by an enterprise, investment prospects (innovative potential), foreign participation, form of financing etc.

Thus, by way of creation and funding sources there are internal ventures: risk groups, divisions; university and corporate ventures like *spin-off* and *spin-out*; external ventures; "independent" ("pure") ventures. We will consider some kinds of venture enterprises in the following parts.

Test questions and tasks

1. Reveal the contents of "venture enterprises" concept.
2. Name the kinds of ventures you know.
3. What groups of ventures does one distinguish by way of creation and funding sources?
4. What do you know about kinds of ventures by form of innovative activity organization?
5. In what forms are internal ventures created?
6. Are "independent" ventures actually independent?
7. In what forms are external ventures created?
8. Tell about distinctions between ways of creation of internal and "independent" ventures.
9. What is the similarity/difference between the spin-offs and spin-outs?
10. Explain whether all innovative enterprises can be considered as venture ones.
11. Describe the internal venture.
12. Analyze the main funding sources of internal ventures.
13. To what classification sign are internal ventures related?

5. VENTURE FINANCING PROCESSES

5.1. Kinds of venture financing

To guarantee innovation processes development new alternative sources of investment resources are required. One of the principal directions of support of middle and small innovative entrepreneurship, financial provision of research works in the developed countries of the world – venture financing.

The survey of references [12; 58; 81; 96; 115; 122; 124; 134; 143; 147] brings to a conclusion that *venture financing* is investment of the venture capital (financial assets) in exchange for a statutory fund share (holding of shares) of an enterprise for its fast development and growth. Venture investments are made by specialized asset management companies through venture capital funds (institutes of joint investment) or by individual investors who actively participate in running of the invested enterprise and exit it when reaching certain indicators of growth and selling their shares of the property to the founders, new financial or strategic investors.

The main *forms of venture financing are:*

- direct cash investments in joint-stock (share capital);
- attraction of investment resources through issuance of debt instruments with possibility to convert such instruments in shares of venture enterprises property;
- mixed financing, that combines the previous forms.

Financing of the enterprises which have got the venture capital, can take other traditional forms of investment: bank, crediting against commodities, factoring and so on. However under conditions of venture investors' control other funding sources usually cannot be attracted without the consent of new co-owners of venture enterprises.

Let us notice, that the means coming from syndicate of venture investors may be insufficient for venture enterprises to carry out investment projects during the first circle. It is that's why there are the second, third and other rounds of venture financing.

Rounds of venture financing are considered stages of renewal of investment resources and entry of venture investors in the enterprise attracting the venture capital. That is the contribution of new investments and a subsequent concession of a part of the property of the enterprise by its founders in favour of investors reflects a round of venture investment. At that during the second and later rounds investors from the previous rounds and absolutely new business partners can participate. Let us mention, that the more rounds of venture financing will take place, the more significant share of

the property will be lost by founders of venture enterprises, because according to venture investment procedure one buys and sells shares of ventures property.

As practice of venture investment shows, enterprises can get financial resources at one round, more often – at two-three, sometimes – at seven and more rounds of financing. All depends on target, rational and timely use of the contributed investments by managers of venture enterprises for various needs of their development.

Mechanisms of interaction of venture enterprises, venture capital funds, AMC and other intermediaries involved in venture financing in Ukraine, shown in fig.5.1 as an example.

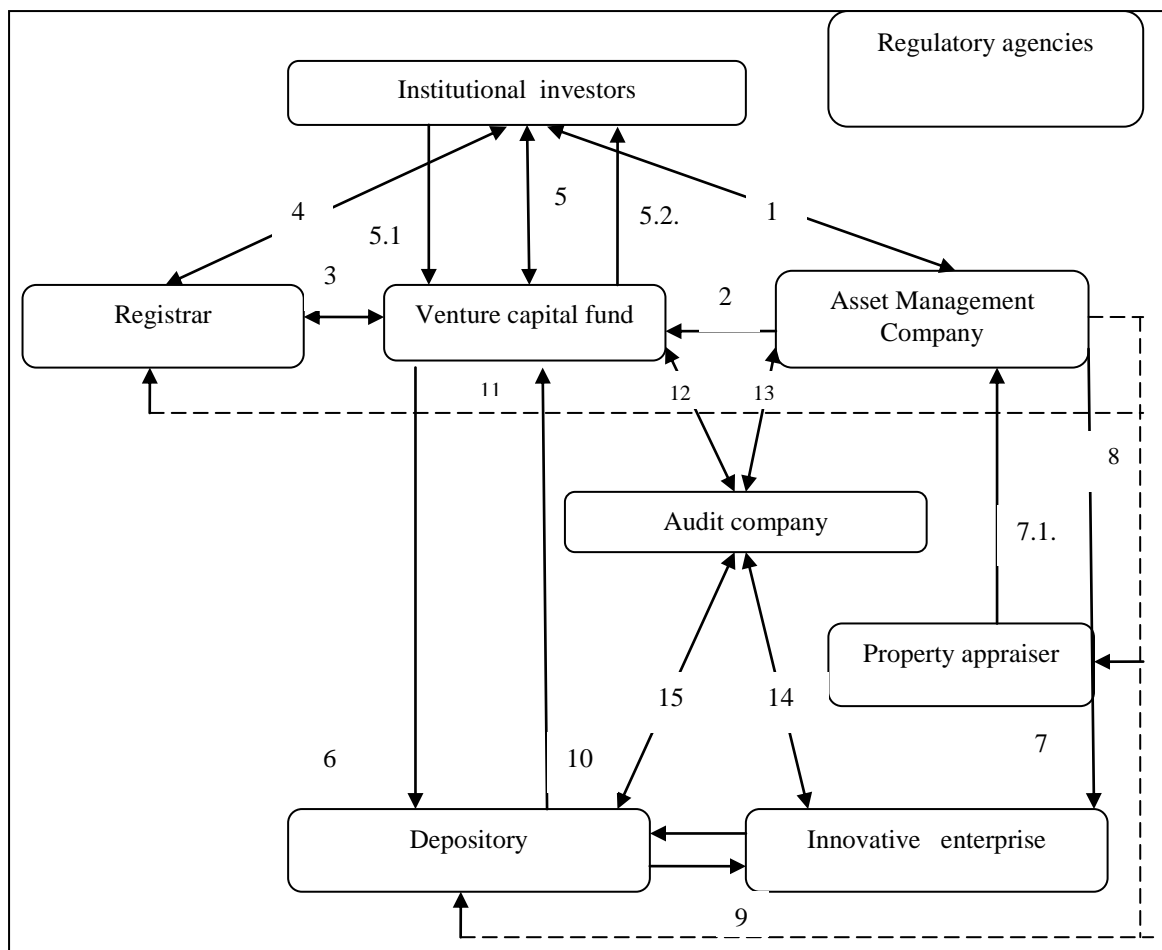


Fig. 5.1. Mechanism of interaction of venture enterprises, venture capital funds, AMC and other intermediaries involved in venture financing

The analysis of sources [94; 96; 97; 117; 126; 128] and own researches on the issue have allowed to draw a conclusion, that financing of an innovative enterprise can occur at several stages. Every author names one or another stage of venture financing in his

own way, but there is no single opinion about unification of names according to various approaches. Therefore there emerged the need to study all possible names and kinds of venture financing in order to avoid confusion of concepts and names of the same stages.

Numbers' meaning on fig. 5.1. *1* – AMC subscribes investors or investors who aspire to invest jointly their funds, make search and address to venture capitalists (AMC) to run venture capital funds; *2* – AMC attract means to establish venture ISI (venture capital funds) or get on trust conditions means of funds for their administration and declare issue of investment certificates of such funds; *3,4* - registration and fund introduction in the Single State Register of Institutes of Joint Investment (SSRISI), registration of investors, investment certificates; *5* – assets injection by investors of the fund and getting of investment certificates: *5.1* – injection of cash assets by investors of the fund; *5.2* – acquisition of investment certificates by investors of a fund; *6* – investors' means are placed to depository accounts; *7* – AMC considers investment proposals, conducts negotiations between AMC and an innovative enterprise: *7.1* – appraisal of intellectual property objects which are included into venture enterprise statutory fund; *8* – conversion of a venture enterprise into a joint-stock company and authorized capital formation; with the consent of the Supervisory board of venture fund to investment of a concrete venture enterprise an investment manager becomes a member of directors' board of the invested organization; *9* – means of the fund from the depository arrive in the venture enterprise account for venture project implementation; *10,11* – venture capital fund managers get equity rights (shares, stocks) for control and running of the invested company; *12, 13, 14, 15* – audit company conducts an external audit of financial and industrial and economic activities of the venture enterprise, AMC, venture capital fund, depository concerning target draft on funds by the venture enterprise, target direction of their AMC, depository bank and venture capital fund; AMC agreements with the property appraiser, registrar, depository, audit company.

Venture financing kinds are divided according to stages of life cycle of the innovative enterprise, stages of innovative development or thoses of innovation process at which one finds an innovative enterprise.

Often scholars treat kinds and stages of venture financing as similar notions. It can be explained by that that venture financing of innovation processes occurs gradually, that is the venture capital is provided stage by stage to ensure sequence of processes of introduction of innovations. The stage of innovative development when the venture capital is provided, stipulates formation of venture financing kind. Simultaneously a certain kind of financing is called a stage of venture financing, noticing, that there will

be several of such stages – depending on quantity of stages of innovation venture process and investment rounds.

Kinds of venture investment are classified according to:

1) stages of an innovation process: financing of researches and development of innovation idea; concepts of new production; a design, a prototype, a pilot sample of innovative product, financing – marketing and production researches to bring the innovative product to the market; stage of production, growth of volumes of production of the innovative product; expansion of activity of the enterprise regarding release of the innovative product (financing of the innovation expansion stage);

2) sources of the capital of financing of innovations at the stage of: use of own means, savings of founders of an innovative enterprise; attraction of funds of a family and friends of founders-inventors of an enterprise; of private individual investors (angels) of private funds of individual investors' rich families; of the venture capital of professional venture capital funds, venture capital companies; of industrial companies, corporations; of business banks and other financial institutions; through both private and public placement of shares of an innovative venture (PO, IPO);

3) stages of life cycle (development) of an innovative enterprise: "preseed" (*early stage*); "seed"; initial (*start-up*); expanded – the first stage of venture financing (*expansion*); later on (*later stage*) – the second stage of venture financing (*management buy-out, management buy-in*).

The review of the given classification of venture financing kinds [94; 96; 97; 117; 126; 128] causes the need to systematize and standardize synonymous names by the stages of venture financing in order to avoid uncertainty when using of two and more synonymous terms of the same stages. With that end in view we offer the matrix of correspondance of venture financing kinds to various classification signs.

According to stages of innovation process there is financing of:

- 1) researches and development of an innovation idea;
- 2) researches and development of new product conception;
- 3) researches and development of the design, prototype, pilot sample of the innovation product;
- 4) marketing and production researches to bring the innovative product to the market;
- 5) production stage, growth of volumes of production of the innovative product;
- 6) expansion of activity of the enterprise manufacturing the innovative product (financing of the stage of innovation expansion).

According to capital sources to finance innovations:

- 1) use of own means, savings of founders of an innovative enterprise;
- 2) attraction of means of the family and friends of founders and inventors of an enterprise;
- 3) draft on funds of private investors - possible sources are also means from private funds of rich families, private persons, resources of professional venture capital funds, venture capital companies, industrial companies, corporations etc.;
- 4) attraction of the venture capital of professional venture capital funds, venture capital companies. Probable sources of investments – means of industrial companies, corporations, business banks and investment banking firms, of other financial institutions, individual investors, at times – attraction of means through public offering of shares of an innovative venture enterprise (ipo).

According to the stages of life cycle of an innovative enterprise (see above).

Absence of accurate criteria of differentiation of innovative and venture enterprises has caused the need to define the point of time (financing stage) of an innovative enterprise when it acquires the status of a venture one.

On the basis of the data received by scholars [30; 31; 126] and our own researches on venture financing of innovations we can assert, that the fact of getting of the venture capital by an innovative enterprise gives the reason to consider the question about venture enterprise occurrence. The majority of authors mean by the venture capital investments of professional venture capital funds in fast-growing innovative enterprises. The investments coming from individual investors, sometimes - from incubators, means of a family and inventor's friends are usually not considered as venture ones. Therefore the stages of financing before venture capital funds and companies get involved are sometimes considered as preventure ones and are called accordingly initial stages (incubation, angel stages and so on). [11; 19; 58, p. 387; 81, p. 11; 115, p. 170; 122; 124, p. 78; 134; 138 and so forth].

There is an uncertainty concerning at what stage of development a young innovative enterprise will be considered as the venture one. Since individual investors who put means into little-known innovative enterprises through venture capital funds created by them (angels associations) are often called informal venture capitalists, getting of means from such individual investors in exchange for a part of shares of the enterprise it is possible to consider as getting of the venture capital, and hence – acquisition of the status of the venture enterprise by the innovative one. Private investors participate in running of the invested enterprise for fast introduction of innovations and return of the committed finances by exiting the enterprise. That is why

the basic criterion of acquisition by the innovative enterprise of the status of the venture one is the fact of getting of the venture capital as from private investors (angels), as from professional venture capital funds or companies. Venture capitalists can put means, beginning from start-up stages of innovation concept development and to production and promotion of the finished innovative product to the market. Therefore the stage of life cycle of the innovative enterprise, and also a stage of innovative process at which there is an innovation development, cannot be considered as decisive conditions of belonging of the innovative enterprise to the venture one.

In spite of common characteristics of venture financing, in particular the status of direct investments ensuring the rights of co-owners of the invested STIC which shares are not listed on stock exchange, the main differences between individual investors (angels) and venture capitalists is investment by them of the venture capital in various stages of development of enterprises and venture projects, different volumes of financing and title to such resources. For example, venture capitalists dispose of means of venture investors, instead of their own, as angels do.

5.2. Venture financing schemes

Ways of creation of venture enterprises, funding sources and sequence of attraction of the venture capital form schemes of venture financing – internal; external; "independent".

The internal scheme of venture financing provides for the intracompany organization of temporary rather independent research departments, self-contained research departments, new enterprises (*spin-off* and *spin-out*) with their own science and production cycle of up-to-date products adoption within frameworks of parent companies. Usually at such scheme of financing in parent companies structure they create rather separate funds of financing of scientific and technical development of companies or subsidiary venture capital funds, also rather independent from the standpoint of making investment decisions.

This scheme provides for intercompany syndicated financing of venture projects through co-operation of various resources and commercialization of venture products on the basis of the existing or newly established enterprise.

External schemes of venture financing are mainly diverse and complex in their agreements on distribution of payments of each of participants of venture process. Such schemes of financing lead to formation of scientific and technical (venture) alliances of

companies, research consortia, technologically focused joint enterprises or organization of scientific and technical clusters.

In fig. 5.2. two widespread schemes of financing of venture joint enterprises, developed by O.E. Kuzmin and I.V. Lytvyn are shown. They provide for venture investors' stake in ownership of the enterprises which are the main things in carrying out of venture projects and production of venture products.

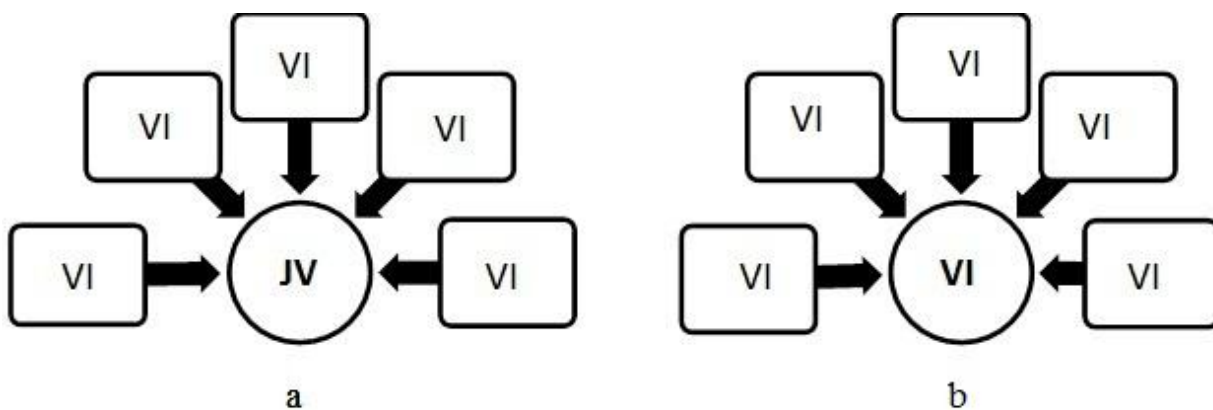


Fig. 5.2. External schemes of venture financing

a – venture investors' contribution and creation of a new enterprises (JV); b – realization of the venture project on the basis of the existing enterprise, at that every of venture investors remains a co-implementator of the venture project, that is performs separate stages, project works; VI - a venture investor, a co-implementator of the venture project; JV – a newly created joint enterprise.

External schemes of venture financing provide for medium-term or long-term pooling of capital of participants, means of the state structures, local authorities, scientific institutions etc. for carrying out of venture projects. Every participant makes a contribution to realization of the venture project as financial resources (venture capital) and, besides, ensures fulfilment of separate stages of innovation process of innovations commercialization.

After the project has been carried out such structures mainly cease to exist, although under condition of creation of long-term relations within the frameworks of cluster associations they can exist much longer.

"Independent" schemes of venture financing are considered traditional since they do not cause contradictions concerning their belonging exactly to venture financing. These schemes provide for independent creation of an innovative enterprise by

inventors, owners of intellectual property, stage-by-stage attraction of the venture capital (primarily angels, afterwards – professional venture capitalists and venture capital funds), stay of venture investors and “growing” of the enterprise to the level of large public company. That is this scheme reflects the traditional process of venture financing.

Possible schemes of venture financing and venture entrepreneurship subjects’ participation in them are shown in fig. 5.3.

Investment business analysts assert that the main advantages of venture investment are the following:

- possibility to minimize the size of tax load on the enterprise; since venture ISIs are not taxpayers, taxes are imposed only when profits are paid to its participants while exiting venture ISIs;
- minimization of risks due to diversification of financial investments, selection of projects that differ on consumption or production spheres, development stages, strategy of invested objects exit;
- granting to the enterprise of unsecured loans, providing that the venture ISI has the equity rights of this enterprise;
- creation of the effective mechanism of control over activities of the invested enterprises by direct participation of the asset management company of venture ISI in running of such enterprises;
- one can invest in one project with no limits of investments.

Thus, venture financing is investment of the venture capital (financial resources) in exchange for a share in the collective investment fund (block of shares) of the enterprise for the purpose of its fast development and growth. The main forms of venture financing are: direct monetary investments in joint-stock (share capital); attraction of investment resources through issuance of debt instruments; mixed financing, that combines the previous forms.

Venture financing occurs at several rounds. Usually that means involvement of new venture investors in the enterprise and surrender of a new share of the property of founders of the enterprise to its investors. The more rounds of venture financing will be, the more significant share of the property will be lost by founders of venture enterprises.

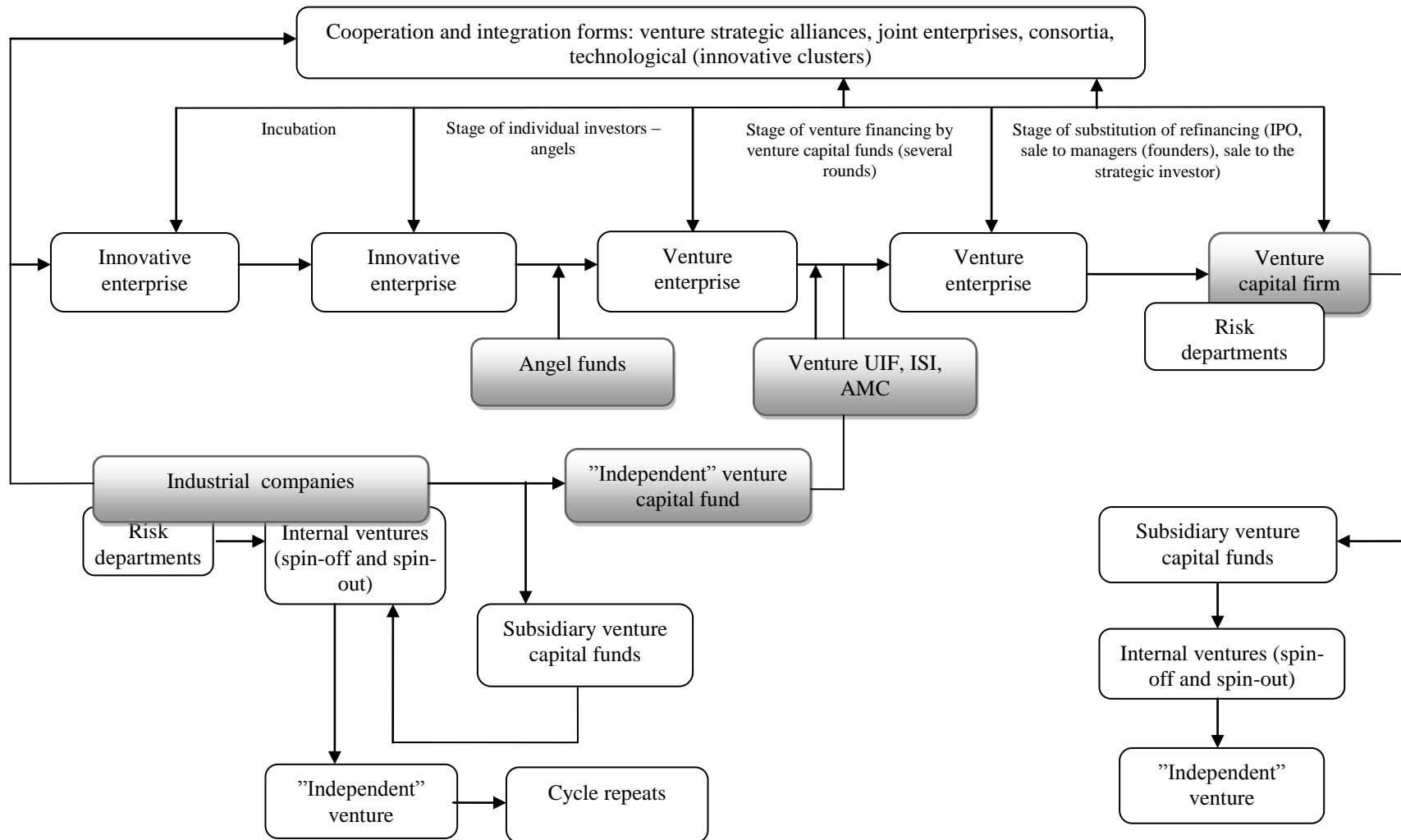


Fig. 5.3. Use of various venture financing schemes

Test questions and tasks

1. Describe the process of venture financing.
2. Explain mechanisms of interaction of venture entrepreneurship subjects during venture financing process.
3. Name the main stages (kinds) of venture activity financing.
4. What do you know about venture financing forms?
5. What schemes of venture financing exist?
6. Tell about the main advantages of venture financing to enterprises.
7. At what stage of development will a young innovative enterprise be considered as the venture one?
8. Analyze the schemes of venture financing which are considered traditional from the point of view of attraction of venture entrepreneurship subjects known to you.
9. What sources of venture investment do enterprises mostly use at the stages of seed and expansion?
10. Consider the main and substantial items of expenses of the enterprise at the early stage.

6. STAGES OF INNOVATIVE ENTERPRISES DEVELOPMENT FROM THE STANDPOINT OF THEIR NEEDS IN VENTURE CAPITAL

6.1. Life-cycle stages of venture enterprise

The process of every enterprise development goes through certain stages (phases) of life cycle. Peculiarities of performance of industrial and economic, investment, innovative, financial and other activities are inherent in every stage of such cycle. For innovative companies concerning themselves with development of new products, there are characteristics depending, on a stage where innovative solutions are, on duration of functioning of such organizations in the market and so on.

According to the innovation process stage they distinguish the following stages of realization of the innovative product by the enterprise:

1. Origin of the idea.
2. Initial stage.
3. Research sample.
4. Market entry.
5. Growth.
6. Expansion.
7. Maturity.

The diagram of interdependence of the stages of realization of innovative venture projects and the stages of innovation life cycle is shown in fig. 6.1. Let us notice, that depending on the mentioned stages and phases of innovative development the stages of venture enterprise life cycle are formed.

Every stage of venture enterprise life cycle needs financial resources, experience and knowledge required for efficient control of venture activities.

Depending on the stages of innovative enterprise life cycle and innovative process where innovative solutions are, they distinguish stages of innovative enterprises development from the point of view of their requirements for the venture capital. At that in the venture entrepreneurship area they have created names of innovative enterprises stages, characterizing that what kind of the venture financing they need, what approximate volumes are and from whom it is possible to expect to get means for innovative development of the enterprise etc.

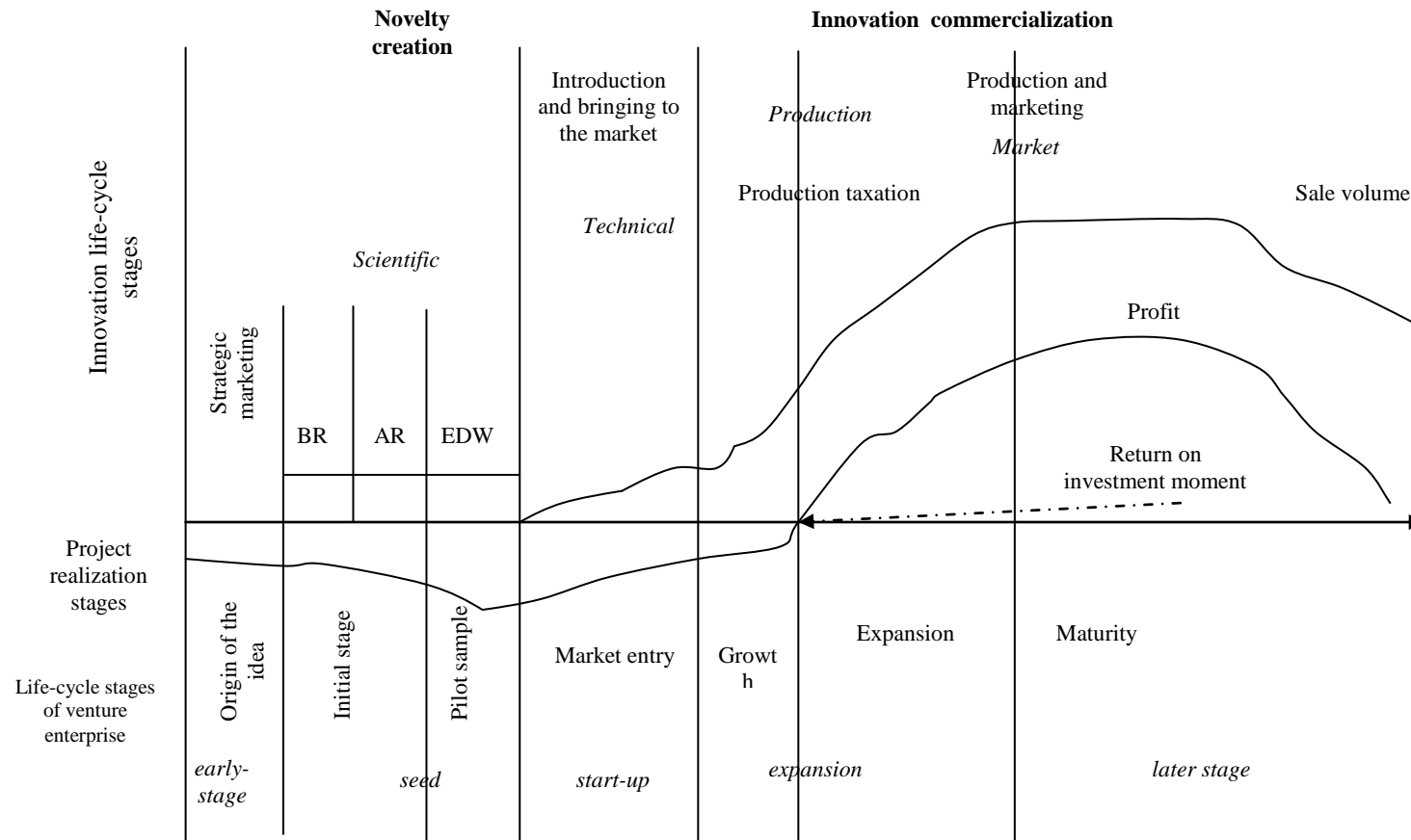


Fig.6.1. Project realization stages and phases of innovation life-cycle

The life cycle stages of innovative enterprise being in search of the venture capital are preceded by those with prediction of generation, searches, estimation, selection, formulation of ideas of future business. Such stages usually do not predict yet creation of the innovative enterprise, and precede formation of such enterprises. However they are important from the point of view of emergence of future venture enterprises. It is on estimation and selection of ideas for realization that depend, whether the enterprise created on the basis of innovative ideas gets the venture capital from individual as well as professional venture capitalists.

Early (they are often called preventure) stages of development of innovative enterprises include "early-stage" and "seed". Both of them are frequently called "early-stage" because they are virtually not backed by professional venture capitalists, even angels are not always agree to consider this issue. The organizations at such stages are in the making and legally are not registered, and consist of groups of persons, inventors, rationalizers who are in search of ideas, their generation, processing, formulation and choice of innovative development direction of the future enterprise.

"Early-stage" is typical for the first phase of innovation project development. The basic sources of investments – means of founders of the enterprise, savings of their families, relatives, friends and acquaintances. The enterprise at this stage does not demand significant financial resources, the majority of which is used for market researches and selection of the most perspective alternative ideas of the product development, to pay for consulting services and to marketing agencies, as well as for preparation of the business plan and presentation of the project to investors.

The group of persons of organization for "seed" as a matter of fact is just an idea: it is necessary to be financed to conduct additional researches, creation of experimental models of the production, business concept evaluation and preparation of the project for search of investments.

"Seed" stage is typical for the second and third phases of the innovation project. At these stages the venture demands significant means for creation and registration of the enterprise, registration and protection of a trade mark, conducting R&D and fundamental marketing researches, production setting, production methods development, selection of professional staff of the enterprise. The basic sources of investments here are angels. For this stage the address also to one's relatives or friends to get "seed" money for the purpose of completion of ideas is characteristic.

It is possible to consider such stage of life cycle of the innovative enterprise as preventure one as the professional venture capital very seldom finances the mentioned enterprises. However under condition of financing by angels who are considered as

individual venture capitalists, these enterprises become venture ones that is why the mentioned stage is also included in the life cycle of venture enterprises.

6.2. Rounds of financing that are typical for professional venture capitalists

In the area of venture entrepreneurship it is usual to consider the following stages of life cycle of the innovative enterprise requiring the venture capital [12]:

1. Initial (start-up) period and the first round of financing. It emerges at the stage of venture enterprise market entry. The majority of means is directed on expansion of activity of the enterprise, accretion of capacities, mass production launch, a marketing campaign and creation of marketing network of the enterprise. At this stage of financing of the enterprise venture and innovative investment funds, companies of the venture capital become active investors. This stage of life cycle of the enterprise is the most difficult for attraction of the venture capital.

In order to get the venture financing, it is necessary for the enterprise to operate at least two – three years in the market, to finalize the idea, to reduce it to the form understandable for investors.

Financing of the venture capital in start-up is very risky, and that is the reason why venture investors expect to get significant remunerations. The initial stage means mainly development of still an idea, instead of a finished product.

Start-up is the enterprise which is already at the stage of completion of business idea working out, that has accomplished initial marketing and begins development of the product (service). If there are positive initial estimations of the business, the financing can pay expenses on development of the product (service), marketing researches, creation of management team and/or drawing up of a business plan.

Start-up can be either at the stage of formation, or already exist during the certain period of time, but has no long market history yet. Certainly, such firms already have the team of managers, the business plan and are ready for operational activities. Such organizations include companies which already manufacture finished products or are at the initial stage of their commercial realization. They have no profit yet and look for additional financing to complete research activities.

Usually such stages of life cycle of venture enterprises are backed by angels, venture capital funds specializing in that.

2. The development period, or the second round of financing. It is directed on support of active growth of the venture enterprise – creation of inventories for expansion

of production, large-scale advertising campaigns, active sales and diversification of products. Banking establishments and credit institutions are attracted to investment. Besides, sources of means are other companies with which the venture enterprise enters into agreements on collaboration by creation of partnership, alliances.

When the idea is embodied in the prototype of the product and economic forecasts and the market analysis are made concerning volumes of production and production distribution, chances to get the professional venture capital essentially grow. However it is necessary to convince venture capitalists, that the idea embodied in the prototype of the product, can be introduced to the market and is able to bring profit. This stage is characterized by active efforts of managers of the given enterprise for break-even point achievement that usually demands one- two years.

3. *The expansion period, or the third round of financing* is directed on expansion of the fast-growing enterprise: increase in its assets, range expansion, research of new marketing outlets and active marketing of products. Resources required for that are attracted by sale of licences for production, franchises for production and sale of products (creation of franchisee network), and also through public issue of shares of the enterprise.

The company has already created the product or service and sells them in the market with varying success. For expansion of activity it needs additional financing, and there must be a new round of venture financing.

At the expansion stage position of entrepreneurs and managers of such enterprise in negotiations with venture capitalists is firm enough as the enterprise is quite close to the moment of break-even point achievement or has already reached it. Company cost essentially increases, under such conditions entrepreneurs will be able to sell smaller quantity of shares and keep their seats on board of directors.

4. *The growth period, or the fourth round of financing*.

The company successfully functions in the market, has growing sales volumes and gets profit but also demands resources for financing of its growth. The received means are directed on marketing, working capital increase, and expansion of manufacturing capabilities and/or development of new products (services). Such enterprise has already passed the break-even point; therefore it is attractive to venture capitalists. The alternative to attraction of financial resources by enterprises is the first offering of shares in the public market – *IPO (Initial Private Offering)*.

Later stages of the life-cycle of the venture enterprise are characterized by transitional financing. Here there are special cases when investors of early rounds of investment exit the venture business, surrendering their shares of the property either to

new venture institutes of investment or to new or old teams of managers interested in the further development and expansion of activity of venture enterprises.

Such financing is characteristic for the mature company which requires investments owing to searches of new possibilities of innovations, R&D, to activation of marketing and sales actions directed on advancement of the existing goods. Attraction of investments occurs through a public issue of shares or possible resale of shares of this enterprise, caused by that that the main stockholders leave the venture business.

The later stages of venture financing include LBOs, those of restructuring and company reorganization (turnarounds), private and public placement of shares (POs and IPO).

5. LBOs (*Leveraged Buy-out*) – reacquisition of the company by the team of managers or founding inventors by using borrowed funds. That is a special case when in order to buy out (return) shares of the property sold at the early stages of venture financing, managers, and company founders' address to new venture capitalists for borrowing.

Sometimes shares in the company sold to venture capitalists at early rounds of financing are bought out not by the venture enterprise founders, but by an outside team of managers familiar with peculiarities of operating in the market, or by managers of large companies interested in integration of the venture enterprise into the structure of such company. Another case – reacquisition of the company or its shares by an outside team of managers to carry out its activity by the venture enterprise (division) independently of the large company.

For small-scale business LBO is one of the ways venture capitalists of early rounds of financing exit the venture enterprise.

6. *The stages demanding restructuring and reorganization of the firm (turnarounds)*. Some venture capitalists finance the business restructuring if the company has found itself in a problem situation and is on the verge of bankruptcy. Restructuring demands cash assets and company management support. Because of difficulties and special features of restructuring measures there is only a small number of venture capitalists who specialize in this type of venture investments.

The presentation of the business plan of company restructuring to a venture capitalist should be focused on a new team of managers which should rapidly turn the company into a profitable one, and on actions that will be taken to facilitate this process.

7. *Private and public placement of shares (POs and IPO)*. It is possible to apply private or public placement of shares for financing of fast-growing business. Venture entrepreneurship is unique in that that it is characterized by individual schemes of

development and financing. For example, private or public placement of shares though it is related to the later stages of financing of venture activity, but may occur at the second round of financing of venture enterprises. All depends on a concrete situation and peculiarities of development of venture enterprises [122].

Private placement of shares. At this stage of development the venture enterprise has an opportunity to attract means through issue of new shares that are sold to qualified investors (investment banking firms and venture investment banks, direct investment funds, strategic investors etc.). At that the company does not become public; the limited circle has the main information on its ways of development. The condition of attraction of such investments is high financial indicators of the enterprise and prospects for its cost growth.

Public offering and initial placement of shares (POs and IPO). This stage is considered as peak of a new enterprise development and the beginning of a new history of the company. As a result of IPO and taking public venture enterprises become public companies. IPO can be preceded by private placement of shares. Of course, for IPO the company should meet strict requirements regarding performance indicators and control system quality.

Company shares become accessible to a wide range of investors that causes occurrence of both positive and negative consequences for its development. The shares are listed on stock exchanges or traded on an OTC market.

The company which decides to attract new resources through the public offering and primary placement of shares, should meet investors' requirements: to have the block of shares ready to placement, or to get already existing shareholders' consent to issue new shares; to draw up an effective Program to increase liquidity and share value and so on. There are other strict conditions for IPO as well. The basic directions of the Program to increase liquidity and share value – improvement of an information openness of the emitter, formation of the story for investors, working out of professional actions on the exchange to achieve the mentioned ends of the program.

Thus, the stages of life cycle of venture enterprises can be considered from the point of view of their requirements for the venture capital. In this connection they distinguish: the early stages of development of venture enterprises; start-up and the first round of financing; the development period or the second round of financing; the expansion period or the third round of financing; the growth period or the fourth round; the later stages of venture enterprises development.

Early (“preventure”) stages of development of innovative enterprises include those of "early-stage" and “seed”. They are frequently called "early-stage" as they are virtually

not backed by professional venture capitalists, even angels are not always agree to consider them.

The later stages of venture financing usually include special cases when investors of the early rounds of investment may leave the venture business. These are stages of LBOs (Leveraged Buyout); situations demanding restructuring and company reorganization (turnarounds), private and public placement of shares (POs and IPO).

Test questions and tasks

1. What stages of realization of the innovative product do you know?
2. Name the stages of innovation life cycle.
3. Consider the stages of venture enterprise life cycle.
4. Explain the interrelation among the stages of realization of the innovative product, those of its life cycle and the stages of venture enterprise life cycle.
5. What stages of innovative enterprises development are related to the early (“preventure”) ones?
6. Describe “organization for seed” from viewpoint of its need in the venture capital.
7. Analyze the basic sources of the early-stage of financing of innovative enterprises.
8. What stage of venture enterprise development is mostly financed by angels?
9. What do you know about the stages of venture enterprise development which are mostly backed by venture capital funds?
10. Tell about special features of the later (transitional) stage of financing.
11. What organizations are related to start-up companies?
12. Define the stages of "development" and “expansion” of life cycle of venture enterprises.
13. What stages of the life cycle of venture enterprises are usually related to the later stages of venture financing?
14. Describe the stage of LBOs.
15. Analyze POs and IPO stages of the life cycle of venture enterprise.

7. SYSTEMS OF BOTH STATE AND PRIVATE SUPPORT AND DEVELOPMENT OF INNOVATIVE VENTURE ACTIVITY OF THE WORLD'S LEADING COUNTRIES

7.1. Structure and types of innovation systems of the world's leading countries

Competitive position of the leading countries and large companies in the world markets in many respects depends on new technologies, rates of their renewal, as well as on systems of both government and private support and development of the innovative entrepreneurship, formation and implementation of a purposeful innovative policy at national, regional levels and that of enterprises. Tools and mechanisms used methods of stimulation and support of innovative activity are very diverse and reflect an actual situation and peculiarities of national economy.

The state support of both innovative and venture entrepreneurship in the majority of the developed countries was being formed throughout long period of time and has acquired all signs of systems which are characterized by the following elements [26]:

- purposes and tasks for which realization the system is created,
- institution responsible for functioning of the system;
- formation criteria;
- formation principles;
- functional subsystems having a precise structure and formed according to directions of the state support of small and medium-sized business;
- set of initial elements of the system;
- set of connections uniting all components in a single unit.

They distinguish four stages of formation and development of systems of the state support and development of small and medium-sized innovative entrepreneurship (mainly formation of systems in the developed countries):

The first (1890-1950) – creation of preconditions for formation of innovation systems on the basis of antimonopoly regulation.

The second (1951-1970) – formation of systems of the state support, which action is directed mainly on integration of subjects of small and medium-sized business into economic complexes of large corporations.

The third (1971-1990) – increase in range of systems that was caused by recognition by the state of the important function of small and medium-sized business to ensure positive dynamics of social and economic development.

The fourth (1991 - present time) – their convergence which basic sign is formation of an innovative vector of development of small and medium-sized business of the

countries – key innovators. The characteristic signs of the present stage of development of systems of the state support – a powerful infrastructure, growth of importance of information and advisory support and support of small and medium-sized business in regions with a low level of economic activity [26].

In the developed countries there have developed and are functioning three types of systems (models) of the government support and development of innovative venture activity: European, American and Japanese. In each of them systems of the state support of small and medium-sized business that are well structured, balanced, and highly effective and based on constant monitoring have been formed. Each of the mentioned types of systems is characterized by the certain emphasis on some directions, kinds and tools of the support.

The European model is realized at two levels – supranational and national, that allows dividing rationally procedures of decision-making concerning provision of individual kinds of the state support to its recipients. In order to increase competitiveness of the European economy the activity of system of the government support of small and medium-sized business in the EU is directed on consolidation of single domestic market and internationalization of enterprise activity at the level of its individual subjects. That is reflected in drawing up and implementation of the all-European and national programs. The main of them:

- European programs of the financial aid;
- national programs of simplification of procedures of creation of new entrepreneurial structures;
- European program of development of secondary stock market EASDAQ;
- European program of development of angels network;
- European and national programs of innovation potential increase of innovative venture business;
- program of administrative integration in the EU;
- European and national programs of use of electronic commerce by subjects of small and medium-sized business.

In the EU countries the important role belongs to direct financial support of the small and medium-sized business majority of which is provided by way of of the target financial aid (grants, subsidies).

American model. Unlike the EU countries where authorities to provide the state support of the innovative entrepreneurship are distributed among the European commission, EU establishments, central and local authorities of the member countries, in the USA the government support measures are developed, carried out and coordinated

by the Small Business Administration (SBA). The survey of programs of the government support of small and medium-sized business existing in the country indicates that financial support, attraction of supported subjects to fulfilment of state orders, innovative, export and technical support are priority.

The characteristic signs of the American system of the government support of small and medium-sized business:

- its influence on individual private institutes concerning making decisions by them about giving of joint aid to the subjects of small and medium-sized business;
- low level of subsidies and other kinds of the target financial aid in the structure of financial support programs;
- earning of incomes from implementation of programs of the government support;
- unique form of cooperation among government, private and social sectors in the area of formation and implementation of the government support.

The Japanese model is distinguished by orientation to assistance to cooperative undertakings of the small and medium-sized enterprises. The special feature of the Japanese system – a high level of development of subcontracts system providing with orders enterprises of small and medium-sized business and making interaction of these business subjects more effective. The principal direction of the state support in Japan, to which the rest are subordinated, is comprehensive assistance of the state to innovative activity of these business subjects which are recognized as the most active in creation of innovative products and technologies. The system of the state support of these structures in Japan is of an indirect nature; its high efficiency has been achieved thanks to an improved practice of evaluation of government programs by their recipients and consolidation of associations of these entrepreneurship subjects.

In Australia, Canada, New Zealand, Norway and Switzerland during formation of the state support of innovative entrepreneurship they apply principles of keeping of consensus in a society and the recommendations of the international organizations (OECD, UNIDO) and integration associations (EU). The structure of the government support is defined by four basic directions – financial, innovative, information and advisory and export support. Within their frameworks they actively use the traditional and innovation tools demanding access to the newest information and communications technologies (creation of virtual cooperatives, regional platforms, on-line systems of business diagnostics et al.).

The European, American and Japanese models are applied in practice of formation of systems of the state support of small and middle-size business in other developed

countries: European – in Norway and Switzerland (not part of the EU), American – in Canada and Australia, Japanese – in Korea and New Zealand.

Innovation policy renders essential influence on development of innovation systems and formation of mechanisms of both state and private support of innovative and venture entrepreneurship. The review of references has allowed generalizing the basic types of innovation policy of the developed countries of the world and to trace their evolution.

The technology-push policy was applied in the USA in 1940-1950. It is characterized by definition of priority directions of development of science and engineering by the state having necessary material resources, appraisal and informational support. For solution of scientific and technical and social and economic problems drawing up of various government programs, large investments, and other direct forms of state participation in regulation of innovation processes was provided. Creation of essentially new directions in the area of electronics, communications, aircraft construction, and computers was an obvious case of such policy.

The policy of market orientation was used for the first time in the 70s of the XXth century in the USA, Germany, Japan, and in the beginning of the 80s – in the majority of the developed countries of the world. According to this policy the leading part of the market mechanism was proclaimed which consisted in resource allocation and definition of directions of development of science and engineering. The model is focused on restriction of the role of the state in stimulation of basic research, creation of appropriate economic climate and information environment for development of innovations at enterprises, reduction of direct participation of the state in R&D and market researches, as well as on reduction of direct forms of regulation which harm stimulation of the market initiative and efficient reorganization of the market.

The policy of social orientation started to be applied in the USA in 1960-1970. It was based on regulation of social consequences of STA. Making of innovative-investment decisions was based on a wide consensus of social and political forces with involvement of the public at large. Large amount of developments in the military sphere, directed to the civil industry for production of the consumer goods is characteristic of this historical period.

The policy of economic structure change of the economic mechanism is characteristic of the present stage of global economy development although it is applied first of all by Japan and some other technologically developed countries of the world. Its implementation was influenced a lot by advanced technologies directed on solution of social and economic problems, changes of industrial structure, interaction of economic

management subjects, standard of living and so forth. Carrying out such policy means that the one-way flow of technologies is replaced by joint research on the basis of reciprocity. Thus constant arrival in the country of new perspective developments is ensured.

7.2. Characteristic of policy and systems of support and development of innovative venture activity

Complexity, long-term consistency of innovation policy, and also priority stimulation and support of small innovative (venture) business are common for the developed leading countries in the area of innovations introduction. The governments of the USA, Japan and the European countries consider as strategic goal assistance to development of both small and medium-sized enterprises in STA sphere and attraction of investments by them through venture financing.

Typical measures of stimulation of innovative activity of small-scale business in the leading developed countries of the world include:

- financial support of creative career of able students, post-graduates, scientists;
- simplified procedures of creation and formation of small venture business;
- organization on the basis of universities and scientific centers of venture laboratories and firms like spin-off and spin-out, science and business integration through formation of scientific and technical clusters;
- stimulation of innovative activity of the corporate sector, involvement of scientists, engineers, including ones from abroad, to implementation of national and joint international investment scientific and technical programs;
- allocation of budgetary funds (investments) for development of innovative venture infrastructure which serves scientific and innovative activity;
- formation of global network systems of exchange of scientific and technical knowledge and developments for the purpose of internationalization of all kinds of scientific and technical activity and communications of scientists, engineers, scientific organizations;
- ensuring attractive economic conditions for inflow of investments to technological venture business.

Let us consider by way of example of the world's leading countries the characteristics of systems of stimulation of both innovative and venture activity.

USA. The full-scale national policy of stimulation of innovative activity in the high-tech area started to be formed in the USA in the early 70s of the XXth century as a response to the challenge of Japan and a number of countries of Europe that began to displace American manufacturers both in traditional and in new markets of technically complex products. Characteristic features of innovation policy of the USA in this sphere:

- orientation to ensuring global leadership in the majority of technological production markets;
- as broad as possible attraction and use of results of military R&D by the civil sector;
- various forms of stimulation of inflow of internal and external private investments in the R&D area;
- development of small innovative venture business;
- support of the international technological cooperation with a tight control over observance of national interests.

The national innovation policy of the USA is carried out by means of taking of a wide complex of measures of legal, financial and economic, organizational, information and educational nature.

There is a ramified network of government programs of support of small innovative venture entrepreneurship in the USA which is represented by:

1. Small Business Administration (SBA) – the agency of the Department of Commerce, under which jurisdiction Small Business Investment Companies (SBIC), ensuring credit arrangements to small-scale business, doing it independently or together with other financial organizations. In most cases the Administration activity consists in granting guarantees to banks for giving of credits (level of interest rates is equal to the cost of borrowing for banks plus 2,5-2,75%). The important feature is allowance of long-term credits, usually for 7-25 years.

2. Small Business Investment Companies (SBIC) – specialized investment companies under control of the SBA, they are private and make their own decisions about crediting. However, according to legislation requirements, they are obliged to give credits or investment means for a period of not less than five years. The investors of such companies (stockholders) are granted tax privileges and state guarantees of return of their means.

Japan. Having begun in the 50s of the XXth century a comprehensive modernization of the industry in order to become by the 70s one of the global leaders in mechanical engineering, instrument making and electronic engineering, the country

developed and consistently carried out a packaged policy in the technological sphere. Characteristic signs of this policy:

- strategic planning and strict regulation of development processes of priority export-oriented industries (automobile and shipbuilding industries, instrument making, electronics);
- application of the package of financial and economic methods of stimulation and the state protectionism;
- intensive and long-term campaign for acquisition of foreign licences to use technologies being at the final premarket phase;
- ensuring of as fast as possible getting on to new technologies in manufacture and release to foreign markets of relatively cheap high-quality products;
- purposeful stimulation of activity of both small and medium-sized enterprises in the industry – potentially the most active subjects in the innovative sphere.

In Japan at the nationwide and regional levels there created about one and a half dozen of various institutes of support of small and medium-sized enterprises (SME) including: The all-Japanese central committee of SME having over 1 tsd. instructors in the sphere of innovations; the Japan Chamber of Commerce and Industry (日本商工会議所) and its regional branches; the State corporation of development SMEs; Financial corporation SMEs which has more than 150 branches in all regions of Japan; all-Japanese and the regional centers of computerization of SME; Corporation of credit insurance SME and other institutes of support.

The innovation policy of Japan is directed on encouragement of direct investment in foreign hi-tech companies and on active participation in international research projects.

The policy of the leading European countries and their technological companies in the innovative sphere reminds the signs of that of the USA with insignificant differences caused by distinctions in the level of economic and scientific and technical potentials of these countries.

The European experience of support of universities to encourage development of spin ventures is worthy of attention. The state policy of entrepreneurship support of business in the academic milieu of Europe is divided by the level of selection of innovation projects and the level of support of young ventures by universities:

1. The policy of weak selection and weak support of ventures provides for encouragement of creation of a considerable quantity of innovative enterprises, but they get a little support. Such passive policy is justified in a society where significant experience of venture entrepreneurship has been accumulated and there is a fair quantity

of external venture investors which make a commercial selection of perspective projects by them.

2. The policy of thorough selection and significant support of ventures provides for selection of quality projects and giving them a comprehensive support. It promotes growing of global market leaders. This policy should be applied in the environment not too favorable for innovative entrepreneurship, since it is more risky than the first one [87].

For a short history of development of university spin-out and spin-off companies in Europe they distinguish four models of organization of their activity, corresponding to different time periods:

1. There are no proactive processes of creation of spin-outs (the mid-90s of the XXth century). At this model the process of spin enterprises formation is initiated only by individual scientists of universities. Usually they separate themselves from higher education establishment (research laboratory) in order to look for and get services of outside organizations regarding evaluation of the idea and its commercialization. Such scientists got necessary commercial knowledge and experience, while working as advisers on corporate contracts or implementing joint scientific projects with businessmen, therefore they know exactly the possibilities of their technology, its market needs. Modest results of laboratories and impossibility of self-realization of such inventors stimulated them to create their own enterprises for commercialization of their ideas got from cooperation.

2. Minimal support and selection of ventures (from the end of the 90s of the XXth century) provides that only individual scientists define potentials of inventions or concepts, and test them. The university just encourages creation of venture firms; however it does not take an active part in selection of projects and gives no further support, showing little interest in commercialization of the results of their scientists' researches. The university may take a person with a relevant experience on the staff to give assistance in intellectual property appraisal or may attract outside organizations to it. Besides, universities help a little in drawing up of a business plan, but an inventor usually has no access to information resources on product development or forecasts of market growth of such product. Such universities occasionally establish relations with external venture funds, may provide seed-financing from internal funds of higher education establishments. The lack of quality selection of projects, as well as a hostile attitude towards external investors made it impossible for venture capitalists to come to such enterprises.

3. Average level of support and selection of university spin-outs (since 2001). This is construction of internal structures to provide intellectual property evaluation services and those of business and administration dealing with testing and selection of projects, to establish relations between business and science areas, to enter into innovative entrepreneurship networks. According to this model universities began to create within their own structure subsidiary self-contained companies, independent of the budget of universities, so-called offices of technology transfer, that began to render services dealing with thorough analysis of innovation and market potential of innovations, testing of business concepts and products, their well-grounded selection. Based on a detailed study and elimination of projects insufficient market potential, the selection was concentrated on several projects that were able to attract an external financing. Universities have started to establish close relations among themselves concerning joint scientific researches, networks of databases and access to necessary external services which offices of of technology transfer at a university had no possibility to provide. These are harbingers of technological clusters.

4. Provision of complex and all-round support to venture formations (from 1996 and up to date). Specialized universities in the sphere of intellectual property analysis and its transfer to the market, created at the support of government programs of stimulation of innovations and their commercialization, should ensure rendering of quality services to venture inventors and entrepreneurs. Such universities comprehensively evaluated concepts of ideas, technologies, studied innovation potential and passed judgements on expediency of spin-out creation. The commercial potential was defined by the persons delegated by the government or business structures who potentially could sit on the board of directors of a new enterprise. Only those projects were encouraged that: had rather high growth potential confirmed with a written business plan in order to interest potential investors; had the protected objects of intellectual property and a team of managers for implementation of achievement of project results. Such spin-offs and spin-outs could have the incubation period for 8-12 months at the university. And usually for quality selected projects there was a competition among venture capital funds.

The special attention is deserved by experience of the innovative sphere support of *Great Britain*; one of directions thereof is creation in 2001 of the government fund Higher Education Innovation Fund (HEIF) for support and stimulation of commercialization of university knowledge and technologies. The main kinds of the fund activity:

- formation of university spin-out companies;

- licensing of university technologies and contract researches on corporate business;
- establishment of cooperation relations with areas of academic education and business;
- knowledge transfer activities, including trainings and seminars for students and beginning entrepreneurs;
- encouragement of students to create their own enterprises and establish relations of universities with small and medium-sized business etc.

From the mid-90s of the XXth century in the Great Britain there was a considerable increase in spin-outs; in 2006 their number reached 590 university spin-outs that attracted about 12% of the total volume of investments of the venture capital of the country with amount of external financing of £2 bln. That is caused by a high level of academic researches at the universities of the country that is proved by a large number of Nobel Prize winners.

A large support in British scientific and technical clusters is given to innovative entrepreneurship by the objects of innovative venture infrastructure. They include:

- the first angels network of the Great Britain – Oxford Investment Opportunity Network (OION), created in 1995;
- network of business angels of the Thames Valley (TVIN) which unites Thames Valley Economic Partnership (TVEP) and Southeast Economic Development agency (SEEDA);
- angels network Oxford Early Investments (OEI), created by Oxford Innovation in 2004;
- angels network Silverstone Investment Network, formed in 2006 by Oxford Innovation Ltd supported by Oxford Technology Management.

In *Canada* there functions special Advisory Council in Science and Technology. Its main task – give to the government of the country a qualified help when solving various problems connected with scientific and technical sphere. The government of Canada approved the major tasks and principles of activity of the Council:

- early identification of problems in the innovative sphere;
- involving in the consultation process representatives of different scientific disciplines and schools;
- giving scientists guarantees that their opinions will be considered during decision-making process;
- obligatory estimation of innovative activity risks;
- deliberateness and validity of scientific innovation projects;

- estimation of quality of scientific recommendations by independent experts.

In the Russian Federation the activity similar to that of SBA, are performed by regional and Federal funds of support of small businesses, and also by the Fund of assistance to development of small forms of enterprises in scientific-technical sphere. In the Russian Federation the importance of the venture capital development is related first of all to two tendencies, earlier characteristic of Western Europe:

1. There is the shift of R&D resources from the state sector to the private one. Extra-budgetary funds are more actively attracted into science and innovations.

2. The role of mediatory functions increases. In the course of financing experts on commercialization of technologies (first of all on selection of firms for investment) are more actively involved. This is connected with activity of the private sector which is adaptable in any state and is capable to react properly to changes of macroeconomic and other factors of environment.

In Russia the venture capital only emerges, but potentially is the basic sources of of finance for commercialization of scientific and technical developments and restructuring of large industrial and economic complexes. The financial crisis, which had began in 2008, on the one hand essentially weakened the financial system of Russia, and on the other – created preconditions for reorientation of financial resources to the real sector of economy.

According to participants of innovative business, the Russian trading, banking, insurance capital and that of pension funds can turn out as soon as possible as a powerful source of investments in innovation projects of small companies. At that the niche of venture financing in the market of capitals (at imperfection of the financial market and insufficient development of bank crediting) can only increase owing to supply of quality innovation projects.

The study of world experience of venture and innovative entrepreneurship showed that all developed countries carry out an active innovation policy, by introducing on a legislative basis of forms and methods of the state regulation and stimulation of commercialization of results of scientific researches and developments via mechanisms of venture financing.

Modern innovative support systems and measures of stimulation of innovative and venture activity in the the world's developed countries are described in table 7.1, table 7.2 [149].

At different times and untill now in the leading countries various stimulantion means of innovative and venture activity of enterprises are widespread and used (table 7.2).

Table 7.1.

Modern systems of the state support of innovative development in the highly developed countries

Countries	The state support of innovative activity		Main organizational structures of innovation process
	Structures of institutional support	Forms of stimulation	
1	2	3	4
USA	Small Business Administration, National Science Foundation, Federal agencies, National network of technology introduction centers, American Association of Science Development, Technology Administration, National Research Council, National Institute of Standards and Technology, National Technical Information Service, the Office of Technology Policy	Tax exemption, investment tax credit, favorable treatment of depreciation charges, subsidies, target appropriations from the budget; allocation of expenses on the R&D connected with basic production and trading activity, from the sum of taxable income	Technology Capital Network (TCN), technopolises, science parks, risk form of corporations organization, small innovative firms, research consortia and organizations, incubators, scientific and technological centers, research and engineering ones, joint industry and university research centers, venture firms
Japan	State funds of research activity promotion, 中小企業 (Organization for Small & Medium Enterprises), Corporation of financing of a small-scale business, Venture Enterprise Center	Preferential credits, tax exemption, subsidies	Research Development Corporation of Japan (日本研究開発公司), technopolises, science parks, small innovative firms, research consortia and organizations
France	Special government agency INODEV, AFIC (French Association of Investors for Growth), National agency on research introduction "ANVAR" (National Agency for research promotion), National agency of perspective researches, SOGINNOVE (Association for innovation financing), SER (Service of studies and research) etc.	Subventions, subsidies, long-term loans, tax credits, credit guarantees, tax exemption	Technopolises, industrial parks, small innovative firms, research consortia, venture firms, technology transfer centers

Germany	Consortia of small innovative business, specialized state banks - Bank of loans for production and alignment Deutsche Bank, The Federal Ministry for Economic Affairs and Energy (Bundesministerium für Wirtschaft und Energie), The Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung), Federation of Industrial Research Associations (Arbeitsgemeinschaft Industrieller Forschungsvereinigungen), Patent center	Target cost-free subsidies, subventions, payment of technical appraisal expenses, preferential credits, credit insurance system, tax abatements and concessions, accelerated depreciation, target banking credits	Science parks, small innovative firms, research consortia, venture firms, technopolises
Great Britain	Council for Science and Technology, government councils by directions of researches and others.	Tax exemption, subsidies, write-off of R&D costs on production (services) price, credit guarantees	British technological group, technopolises, small innovative firms, science parks, venture firms, research consortia
Canada	Innovation consortia, Canada Foundation for Innovation	Concessional loans, subsidies, technical assistance, tax credit, tax exemption	Technopolises, science parks, small innovative firms, venture firms, research consortia

Table 7.2.

Means of stimulation of both innovative and venture activity of enterprises in the world's leading countries

Means	Description
<i>USA</i>	
Taking of R&D costs, connected with principal production and trading activities, from the sum of the taxable income	Up to 20% of costs
Tax exemption for venture firms and those conducting R&D	Up to 20% increment of R&D costs in comparison with the average annual rate of these costs for the last three years. Up to 20% of costs of companies on programs of basic scientific researches which are conducted by universities under contracts with them. Deductions from a taxable income, the cost of scientific instruments and equipment which universities and research organizations pass to companies free of charge

Favorable treatment for depreciation charges	Equipment service life – up to three years, and for other funds – up to five
Investment tax credit	Profit tax relief of 6% till 10% of the total cost of investments in the equipment
Profit tax relief for organizations - holders of securities of venture structures	60% are tax-free and 40% are liable to ordinary taxes
Guaranteed return of the private capital invested in the venture business, by Small Business Administration (SBA)	Up to 90% of private capital
Giving by SBA of subsidies to venture business: for foreign-economic activity expansion, for various kinds of administrative aid	Up to US\$100 tsd. – for eight years; up to US\$1 mln – for 25 years
Obligatory allocation by federal agencies of funds for budgeting of the venture business	Not less than 1,25% of the agency budget
Obligatory attraction of venture firms to carrying out of large innovation projects according to US legislation	Cost of projects is over US\$100 tsd.
<i>Japan</i>	
Preferential profit tax rate for venture enterprises	Ordinary tax is 42%, and for venture firms – 30%
Tax abatement for private investments in R&D	Of 20%
Getting of subsidies from the state funds	Up to ¥2 mln.
Preferential credits for venture capital funds	Interest rate is of 5-6% per annum
Guaranteed return of means, invested in the venture business, by government organizations	Up to 80% of the amount of finance
<i>Great Britain</i>	
Reduction of profit tax rate for venture companies	Ordinary profit tax is 35%, and for venture firms – 25%
Insurance scheme of the means, provided to venture firms	State guarantees return of 70% of medium-term loans, granted for two – seven years
Write-off of R&D costs on production (services) price	To any amount
Subsidies for researches on development of new kinds of products or technologies	75% of costs of firms where up to 50 persons are employed (but no more than £50 tsd.)
Compensation of expenditure for development and commercialization of innovations according to government programs to subsidize small innovative firms	Up to 50% of costs for development and commercialization of innovations

<i>Germany</i>	
Subventions for advanced training of scientific and technological personnel (no more than five employees from each company): for training period at higher education establishments, scientific institutes, other state or private research organizations	For a period of up to three years
Target non-repayable subsidies to the enterprises adopting new technologies	Various sums for introduction of new technologies or their improvement for a period of up to three years
Payment of expenses on the technical appraisal of projects, estimation of possibilities of patenting of results of R&D implementation	Up to 80% of costs for payment of services of engineering and other consulting firms
Preferential credits for firms putting means into enterprise modernization, adoption of new products output, and also into the actions directed on rational use of energy	Up to 50% of means, invested by a company owner
Preferential credits for firms introducing modern computer technologies and software	Up to 15 years period
Subsidies for small and medium-sized firms for acquisition of property in order to achieve saving of energy consumption	Up to 7,5% of cost of the acquired property
Subventions to small enterprises for R&D investment at acquisition of patents and personal assets, as well as for the period of investments in the real estate used for R&D	20% of cost of the acquired or created property up to certain limits of its cost
Subventions to small and medium-sized companies for scientific researches or development of new technology for manufacture of products	30% of the contracted amount
Insurance scheme of credits	Guarantee to private banks of return of 80% of the cost of borrowing for 15-23 years
Totally VAT exempted	Limited liability enterprises
Application of accelerated depreciation methods	10% of production costs of new equipment
Subventions for science-intensive enterprises which have been existing for no more than two years and with less than 10 employees	75% of expenses connected with their creation or development
Tax abatement for private investments in R&D	Up to 7,5%

<i>France</i>	
Governmental subsidies to the organizations which occupy themselves with research activities under contracts with small and medium-sized firms	Up to 50% of amount of expenditure on doing research on orders of small and medium-sized enterprises
Subsidies to small and medium-sized enterprises	Up to 50% of costs of the enterprises for payment of scientific personnel (no more than a certain sum per annum)
Tax credit for increment of R&D costs	25 % of increment of R&D costs of the companies in comparison with the level of last year
Preferential tax rate for new companies	25% of the profit tax within three years
Means invested in venture projects are tax-free	
<i>Italy</i>	
Preferential credits for technological innovations (50% of the sum of credit is given during realization of a modernization program and up to 30% - during its completion stage)	To the extent of 80% of project costs for up to 15 years period
Subsidies to small and medium-sized enterprises of both extracting and manufacturing industry for purchase and leasing of high-technology equipment and computer support	25% (32 % for southern areas of the country) of technical equipment costs
Income tax rate reduction	Up to 50% of R&D costs within a year. Up to 100% of R&D costs (if the results of researches are not put into practice during the year)
Accelerated depreciation at retrofitting	45% of cost of basic assets (15 % annually) within three years from the moment of equipment acquisition (in addition to ordinary rates of depreciation charges)
Tax remissions if modern advanced technologies are bought	Up to 25% of the sum of investments for the enterprises with less than 100 employees
Reduction of sizes of tax payments	Up to 40-50% of costs for purchase of the services promoting introduction of new technology, depending on the size of enterprise
<i>Israel</i>	
Subventions to conduct R&D	50% of expenses of industrial companies
<i>Canada</i>	
Subsidies to carry out projects of industrial researches	Up to 50% of costs for research personnel's salaries
Corporate tax amount reduction	To the sum equivalent to a part of increment of own R&D costs of the company relatively to the previous level

Tax credit	10 - 25 % of capital and operational expenditure for R&D depending on scope of the corporation and its territorial placement
<i>Brasil</i>	
Tax relief	Reduction to 50% of the profit tax for reimbursement of costs of both Brazilian and foreign companies for scientific researches and development of technologies in the field of microelectronics. This branch products are exempted from 10-15% industrial goods tax. 1% reduction of the profit tax of the companies that invest in national firms dealing with production of information software products and computer technologies
<i>Australia</i>	
Tax remissions for investments in science-intensive industries	50% of the tax established for other branches

Note. The authors did not check whether the mentioned tools of stimulation of both innovative and venture activity of enterprises are still used under the modern conditions

7.3. Activity of national venture capital associations

In the venture entrepreneurship area information and consulting assistance activity to all subjects of venture activity is important. Considering it, the activity of nonprofit private organizations, declaring their main objective development and popularization of venture entrepreneurship is important.

In the majority of the world's leading countries the organizations which have usually begun to be called associations of venture and direct investment have been established. Let us name some venture organizations and their electronic addresses:

1. *National Venture Capital Association* - <http://www.nvca.org>
2. *African Venture Capital Association* - <http://www.avcanet.com>
3. *Australian Private Equity and Venture Capital Association* - <http://www.avcal.com.au/>
4. *Belgian Venturing Association* - <http://www.bvassociation.org>
5. *Brazilian Private Equity and Venture Capital Association* - <http://www.abvcap.com.br>
6. *British Venture Capital Association* - <http://www.bvca.co.uk/>
7. *Canada's Private Equity and Venture Capital Association* - <http://www.cvca.ca/>

8. *China Venture Capital Association* - <http://www.cvca.com.hk/index.asp>
9. *Czech Venture Capital and Private Equity Association* - <http://www.cvca.cz>
10. *European Venture Capital Association* - <http://www.evca.com>
11. *Finnish Venture Capital Association* - <http://www.fvca.fi/>
12. *Association Française des Investisseurs en Capital* - <http://www.afic.asso.fr>
13. *German Private Equity and Venture Capital Association* - <http://www.bvk-ev.de>
14. *Gulf Venture Capital Association* - <http://www.gulfvca.org/>
15. *Hong Kong Venture Capital & Private Equity Association* - <http://www.hkvca.com.hk>
16. *Hungarian Venture Capital Association* - <http://www.hvca.hu/>
17. *Indian Venture Capital Association* - <http://www.indiavca.org/>
18. *Irish Venture Capital Association* - <http://www.ivca.ie/>
19. *Israel Venture Association* - <http://www.iva.co.il/>
20. *Italian Private Equity and Venture Capital Association* - <http://www.aifi.it>
21. *Japan Venture Capital Association* - <http://www.jvca.jp/en/>
22. *Latin American Venture Capital Association* - <http://www.lavca.org/>
23. *Netherlands Venture Capital Association* - <http://www.nvp.nl/>
24. *Russian Private Equity & Venture Capital Association* - <http://www.rvca.ru>
25. *Singapore Venture Capital and Private Equity Association* - <http://www.svca.org.sg/index1.htm>
26. *Spanish Venture Capital Association* - <http://www.ascr.org>
27. *Swedish Venture Capital Association* - <http://www.svca.se>
28. *Swiss Private Equity & Corporate Finance Association* - <http://www.seca.ch>
29. *Thai Venture Capital Association* - http://www.venturecapital.or.th/index_eng.htm

7.3.1. National Venture Capital Association (NVCA)

It is expedient to begin the review of venture capital associations with the oldest and most powerful venture organization essentially influencing venture entrepreneurship development in the USA and on a global scale – the venture organization of the USA (NVCA) [105]. The National Venture Capital Association established in the USA in 1973 for formation at the public at large of understanding of the venture business importance for viability of the US economy and representation in a society of interests

of both venture capitalists and developing companies. The association numbers about 400 member organizations which manage the venture capital of about US\$70 bln. The association's affiliated structure "American Entrepreneurs for Economic Growth" (AEEG) is the national organization covering about 10 tsd developing enterprises where over 1 mln. Americans work.

NVCA mission – to encourage better understanding of importance of venture investment of means in the American economy and support of the innovative entrepreneurial activity. The association represents interests of the state as a whole as well as community of venture entrepreneurs, managers, capitalists etc. It aspires to support high professional standards, to provide reliable statistical data by industries, sponsors professional development and preparation of experts in the area of venture business, facilitates search of contacts, and ensures an effective cooperation of its members.

Along with NVCA there regional venture organizations as well as the associations specializing in rendering of support to firms of various functional signs in operation – by stages of life cycle of innovative firms, industries and so on.

NVCA membership ensures getting of various services by offering participants ample opportunities for access to the necessary, reliable and timely information on venture financing in both the USA and throughout the world. The association protects interests of venture investors by providing support at the state level, co-operates with all departments of the US government, mass media and other public organizations on a national scale in order to help to realize, how venture entrepreneurship development influences that of the American economy. Besides, NVCA enables many venture capitalists and entrepreneurs to become active venture business subjects, to get necessary knowledge and corresponding training.

Vocational and educational activities. NVCA offers vocational programs of development of managers and entrepreneurs, investors to increase awareness and being in the know of venture business subjects with better methods of venture activity, strategy and ways of venture management, the main problems and trends of development of industries which are traditionally considered as venture ones. The association through publishing and online materials periodically informs all interested persons with the necessary facts, considering perspective themes on ventures development, organizes meetings with venture business specialists.

Insurance services support. NVCA – partner of the insurance company "Venture Insure SM" which offers comprehensive insurance services of investments of venture investors, of management of risks at reasonable prices and so on. So, together with

various venture associations the network has been created for improvement of communication process between investors and recipients of the venture capital from all corners of the USA and the world. It helps to increase quantity of contacts and venture bargains, a professional exchange of experience and knowledge among venture entrepreneurs and managers.

In the virtual network they constantly hold on-line meetings, conferences, meetings according to groups of association members' interests.

Researches and publications of the association. NVCA spreads the information about its own researches of problems, important for venture ecosystem development. The association issues directories, newsletters, reviews and analytical matters: "*Annual Yearbook*", "*The Venture Capital Review*", "*Membership Directory*", "*NVCAToday Newsletter*", "*Venture Impact*", "*Year in Review*".

NVCA actively co-operates with agencies "Thomson Reuters" and "Pricewaterhouse Coopers", collects and publishes statistical data of quarterly activity of the venture sector by industries. All its members participating in the quarterly "Money Tree", have access to the private share capital "ThomsonONEcom" for financing of own needs and development.

Public relations. The association actively co-operates with mass media, acts as a connecting link among various sectors of the industry and venture capitalists with venture investors of the USA. Begun by NVCA the program is directed on cooperation of its constant PR-representatives and mass media. It facilitates mutual relations between journalists and NVCA members by introducing the public at large to venture processes.

7.3.2. British Private Equity & Venture Capital Association (BVCA)

The British Private Equity & Venture Capital Association (BVCA) – key organization of venture and direct investments that monitors and regulates processes of venture capital investment in the country. It is an analytical center of trending and analysis of investment areas of the British private capital, the private property rights in the sphere of venture investment [9]. The association was established in 1983 and numbers nearly 400 members. It has more than 25-year experience of successful representation of interests of the industry covering about 57% of the all-European market, before the European Commission and the European parliament, in mass media and other institutes of political and social management in the Great Britain, Europe and the world as a whole.

Main purpose of BVCA – protection of rights and furnishing of the private capital in various spheres of the industry, development of professional standards of activity among participants of the Association.

The major tasks and principles of BVCA activities:

- promotion and attraction of investors in the private property sector of the British industry and the venture capital;
- influence on social policy in Europe;
- attraction of attention and distribution of the information concerning the private property sector and the venture capital;
- influence on political forces activity for the purpose of creation of favorable conditions for existence and development of the market of both venture capital and venture entrepreneurship.

The association numbers more than 180 full and over 170 associated members. Full members include institutional investment funds, their parent companies (banks, insurance companies) which make constant long-term financial investments in the venture companies.

Among associated members of the Association one can distinguish four categories: financial investors (put means into companies once, and this is not defined by the main goal of their activity); investment ones (make periodic initial and secondary contributions to the companies); specialists (both companies and funds which principal kind of activity is investment); academic investors (academic and research centers investing in innovative solutions).

7.3.3. European Private Equity & Venture Capital Association (EVCA)

The European Private Equity & Venture Capital Association (EVCA) was created in 1983 for the purpose of development of the European model of direct investment and the venture capital [42]. It includes over 300 members. The headquarters are in Brussels. The activity is directed on creation in Europe of favorable conditions for venture business development and closely connected with that of the European Commission.

The basic strategic tasks of the Association:

- attraction of institutional investors to take part in the venture investment;
- representation of interests of its members and other participants of the venture industry in the European structures;
- working out of effective and available strategy and mechanisms of venture capital development.

The major issues and programs, to the work of which EVCA contributed, are the following:

1. Regulation of processes of concentration of capital (merger and absorption). In June 2000 the European Commission made the decision on necessity of revision of "Council Regulation of 21 December 1989 on the Control of Concentrations Between Undertakings". The Commission ratified December, 11, 2002 "Green Paper" for reporting the basic ways of reforming of the sphere of these processes regulation. The European Commission had also created a package of basic documents which provided for a number of ways and actions dealing with questions of control over absorption and merger. The package main purpose – creation of a favorable situation and system of protection of firms during processes of takeover and merger at the European area. The peculiarity of such measures consisted in introduction of new decision-making processes on pooling of capitals which demanded more open economic analysis and grounds for the account of interests of the parties, realization of the register of all participants of venture investment.

2. Intellectual property rights protection in the area of patent right to inventions in computer technologies sphere. In October, 2000 the "Program concerning the patent right to the results of inventions in sphere of computer technologies", initiated by the European Commission, started. The absence in the Europe of uniform legislative framework for these questions was recognized as a serious barrier on the way of industrial growth, competition development and construction of the international trade area. During 1999 – 2003 the European private capital along with venture firms have invested in more than 6400 companies working in the software area, in the sum total of over €10 bln. In May, 2004 by the offer and on responsibility of the European Parliament, Council of fair competition protection and with EVCA participation it has been initiated and signed "Agreement on protection of inventions in software sphere" for creation of balance of interests of participants of the right of the industrial property on inventions in the field of the software and computer programs.

3. Risk Capital Action Plan (RCAP). In November, 1997 the Council of Europe in Luxembourg recognized the important role of risk of the all-European market of capitals in the formation of employment and wage policy. EVCA took an active part in research and formation of offers on reduction of such effects and removal of barriers on the way of implementation of the policy to increase employment of the population in Europe.

Thus, the support of both innovative and venture entrepreneurship in the majority of the developed countries was being formed throughout long period of time and acquired all signs of systems which are characterized by the elements:

- activity of institutions responsible for functioning of systems;
- working subsystems with a precise structure, formed according to directions of the state support of small and medium-sized business; set of system initial elements;
- set of connections uniting all components together etc.

The world's leading countries are characterized by worked out systems of stimulation of both innovative and venture activity with characteristics inherent to them. In the venture entrepreneurship area information and consulting assistance activity to all subjects of venture activity is important. The main goal of such assistance is claimed to be development and popularization of the venture entrepreneurship. Such leading organizations include the venture capital associations established vertically in all developed and developing countries of the world.

7.3.4. Russian Venture Capital Association (RVCA)

The idea of RVCA creation was put forward at the seminar for managers of Regional venture capital funds of the European Bank for Reconstruction and Development (RVCF EBRD) in Saint-Petersburg in December, 1996 [125]. In March, 1997 Constituent assembly of RVCA took place. During it ten management companies of the venture capital funds signed the memorandum of association of RVCA.

The basic tasks of RVCA:

- creation in Russia of political and entrepreneurial climate favorable for investment activity;
- representation of interests of RVCA members in government bodies, mass media, financial and industrial circles within the country and abroad;
- information support and creation of communicative platforms for participants of the Russian venture market;
- formation of the skilled experts for venture business companies.

RVCA includes 28 full and 22 associated members.

Membership in the association has its rules and peculiarities. The articles of association, in particular, define, that "member of Association" means "both a full member of Association, i.e. profit organization and an associated one which can be as profit as non-profit organization". Possibility to be admitted as a member of the Association is considered by the administrative board. It has the right to satisfy the application for membership or to refuse membership without explanation of reasons, and when considering applications it takes into consideration circumstances which believes relevant.

According to the Articles of association, all applicants for membership must:

- be active in the sphere of venture investment;
- have a good record in the venture investors' community;
- observe "Association member code of conduct".

The applicant for the Association full membership must:

- work out (in the constituent documents) provision that applicant organization activity category is investment in the share capital of enterprises, gaining of income mainly by a medium-term and long-term investment;
- have on the staff some experts making only venture investment;
- create in management the venture capital funds, to have invested at least one object and actively make new investments;
- actively participate and assist in development of the invested enterprises.

7.3.5. Ukrainian Association of Investment Business (UAIB)

The Ukrainian Association of Investment Business – voluntary, nongovernmental, nonprofit organization based on principles of self-regulation, equality, free will and community of interests of its members. It is founded in April, 1995 and belongs to the oldest professional organizations of participants of the share market in Ukraine [140].

In October 1997 the National Securities and Stock Market Commission (NSSMC) granted the UAIB status of the self-regulatory organization (SRO), and since June 2002 - SRO status of the stock market which unites asset management companies. This is the only self-adjusting nongovernmental organization in Ukraine to which the state delegated a part of its authorities, by having defined them in the Law of Ukraine "About institutes of joint investment (share and corporate investment funds)" and "Regulations about SRO activity of the equity market which unites asset management companies".

The purpose of creation and activity of UAIB:

- ensuring of a high professional level of activity of securities market participants;
- representation of own members and protection of their professional interests;
- vocational and advanced training of its members;
- informing of its members about securities legislation and amendments made to it;
- developing and control over observance of norms and rules of conduct, regulations, rules of conducting securities transactions, requirements to the professional qualification of SRO members and other documents stipulated by the current legislation;

- developing and introduction of measures directed on protection of clients - members of the Association and other investors, as well as on observance of ethical norms and rules of conduct of SRO members in their relations with clients;
- improvement of the normative legal framework of the securities market;
- assisting in organization of financial monitoring of asset management companies in the area of preventing and counteracting of legalization of criminal proceeds and financing of terrorism.

While carrying out its functions, the UAIB has the right to:

- check activities of its members in the manner agreed upon with the NSSMC;
- control observance by the members of the legislation and rules and requirements adopted by the self-regulatory organization;
- with members' consent represent their interests in the NSSMC and other government bodies;
- gather, summarize and analytically process statistical data;
- together with the NSSMC check the members' activity concerning their observance of current legislative requirements as regards a financial monitoring;
- develop and introduce, pursuant to legislation, rules, standards and requirements to the manner of conducting transactions in the stock market.
- introduce procedures of dispute resolution relating to professional activities in the securities market and so on.

UAIB managing bodies. Supreme body of the UAIB – General meeting. It is held at least once a year. During the period between meetings UAIB governing body is the Board of the Association elected by the General meeting for a period of two years. The Association executive office – Directorate. To perform its functions the Association also includes the Revision Commission, the Disciplinary Committee, as well as other specialized committees and commissions.

Membership in the Association is contract-based, at that the founders of the Association have no advantages over its other members.

According to the Board's decision the UAIB has the following sections:

- public funds asset management;
- private funds asset management;
- asset management and pension funds administration;
- assets management of institutional investors (insurance companies, both bank and nonbank credit institutions);
- corporate management;
- book keeping, taxation, accounts and audit;

- software development.

There are also the Commission on taxation and that of experts on legal matters.

Members of the Association have the right to:

- get information about the activities of the Association and its bodies;
 - take part in the General Meeting of members of the Association;
 - vote on all issues submitted to be considered by the General Meeting;
 - participate in elections of the bodies of the Association and be elected to them;
 - take part in drafting of the documents that define main directions of the activity of the Association, submit proposals and recommendations to its Board.
- use the logo of the Association;
 - use methodological guides and material and technical means of the Association, as well as services, consultations and recommendations provided by the Association or its bodies.

The Association closely co-operates with state regulation bodies in investment business area, in particular, according to "Memorandum on Interaction between the UAIB and the National Securities and Stock Market Commission", "Agreement on Interaction between the UAIB and the State Property Fund".

From 2000, “Agreement on creation of the Coordination and Expert Council of Self-Regulatory Organizations of Stock Market of the UAIB, the First Stock Trading System (PFTS) and the Professional Association of Registrars and Depositories (PARD)” has been effective. The Association is developing cooperation with the National Association of Non-State Pension Funds and with administrators of such funds, the Ukrainian Society of Evaluators, the Society of Financial Analysts. Cooperation has been established with the Ukrainian Institute for Stock Market Development, the International Institute of Business, and Kyiv Institute of Investment Management.

The main international partners of the UAIB – the European Federation of Funds and Investment Societies (Fédération Européenne des Fonds et Sociétés d’investissement - FEFSI), it has also established correspondent relations with Associations of investment companies in each European country, the European Private Equity & Venture Capital Association (EVCA), the Collective Investments Center, the Association of Investor Rights Protection (Russia), the CLGC, the International Finance Corporation etc.

In the UAIB structure there are regional offices in Donetsk, Odesa, Dnipropetrovsk, Sevastopol, Kharkiv and Lviv on the basis of local asset management companies of the Association members in operation, performing the following functions: organizational assistance to development of ISIs and non-state pension funds

(NPF) in a region, ensuring of interaction of the UAIB with regional public authorities; coordination of activity of the members of the Association situated in a region; giving of consulting and methodical help to the UAIB members (according to information got at UAIB office); organization of seminars, "round tables" (both its own and in cooperation with the Directorate, partners and the UAIB members).

Test questions and tasks

1. Name the basic directions of the state support of the innovative venture entrepreneurship.
2. Analyze the public policy models of development of small and medium-sized entrepreneurship?
3. Describe the main types of innovation policy of the world's leading countries in the sphere of support of innovative and venture entrepreneurship.
4. Tell about the tools of the state support and development of small and medium-sized innovative entrepreneurship which are used by the world's leading countries.
5. Analyze the foreign associations of venture entrepreneurship support.
6. What organizations spread venture activity in our country?
7. What do you know about the organization created in Russia for the purpose of venture activity realization and support of venture enterprises in the Russian Federation?
8. What is the purpose of creation of the National Venture Capital Association?
9. For what purpose has the British Private Equity & Venture Capital Association been created?

Part 2 VENTURING BASICS

8. VENTURE ORGANIZATION – OPEN SYSTEM AND CONTROL OBJECT

8.1. Main factors of influence on a venture organization as an open system

Venture activity unites various scopes of activity of enterprises and organizations interconnected and interdependent, demands a profound knowledge in scientifically technological, investment, production, marketing, sale areas, the sphere of risk management and others. Achievement of purposes and tasks in each of them will ensure success in achievement of the purpose of venture activity as a whole. That is why special features of venture management make necessary the complex approach to managerial process of venture activity, study of influence of external environment factors on a venture enterprise. The success depends on accuracy of definition of such factors and their rational account for achievement of the desired result.

Application of the system approach (fig. 8.1) consists in the analysis of the component parts (elements) of venture organization and interaction among them, of the processes connecting these elements [80; 110; 159]. In study of venture organizations as open systems is research of factors of external environment influence is crucial.

The elements of venture organization as an open system is a controlling system, a controlled one, exchange flows with surroundings (input – output), transformation process (venture activity) and communication channels within organization (direct and reverse). The venture open system elements include an external environment with a large number of factors – motive forces which influence the organization and. ensure a positive, negative or neutral influence on achievement of final results by the latter. The surroundings play an important role in achievement by the venture system of the goals; therefore there occurs the need of definition of the most essential influence factors. They distinguish among them:

1. Internal factors:

- venture management system: planning system status (mission, goals, innovation policy, development strategy), adaptability organizational structure to external environment, venture managers' professional skills and leader abilities etc.;
- *financial factors*: financial soundness, solvency, credit history, investment ability, possibilities of venture capital funds formation;

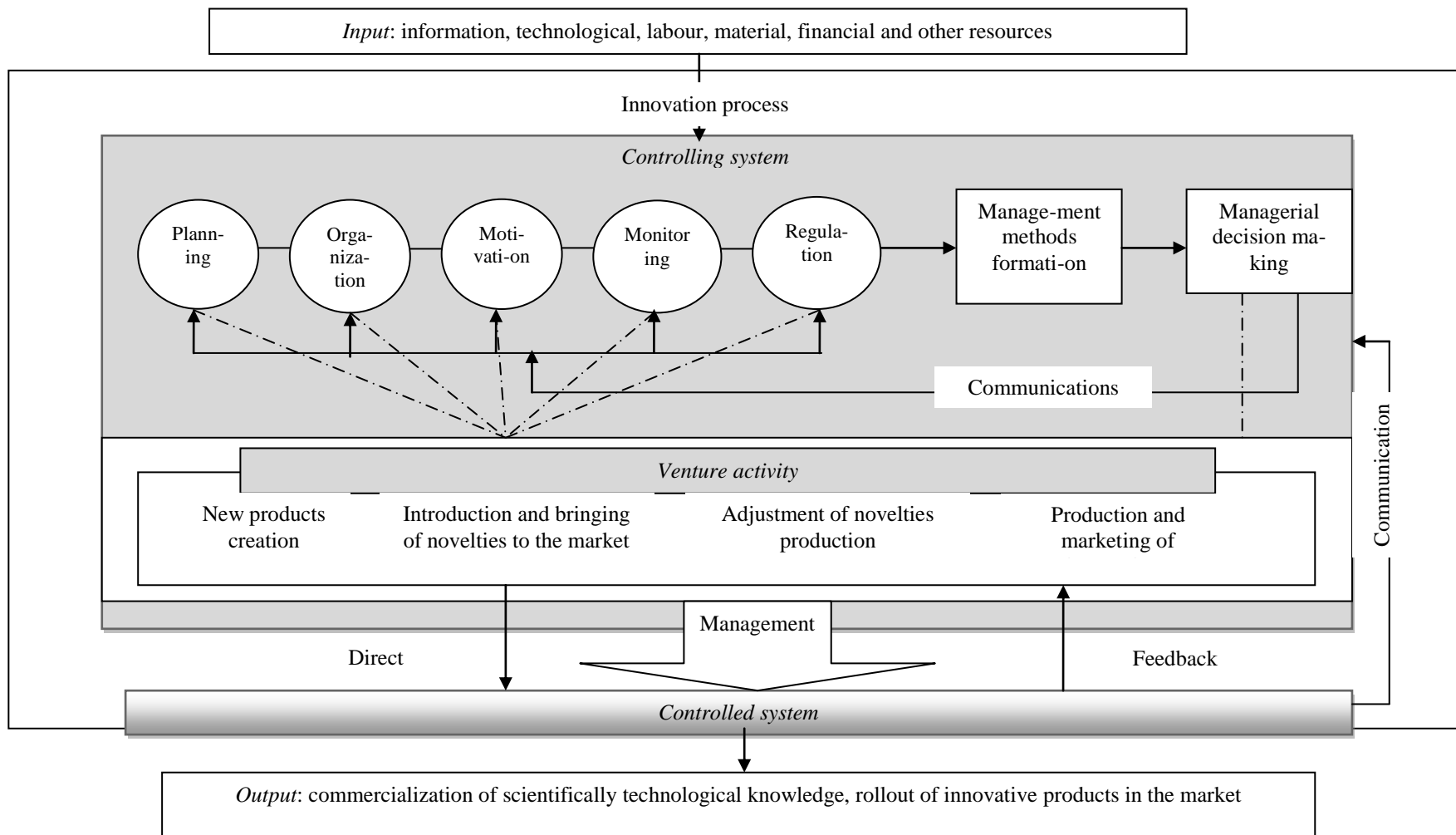


Fig. 8.1. Using the system approach in the venture activity management

- scientific and technical factors: technological level and that of technologies, vocational and qualification structure and level of operating personnel of organization, conformity of production to the international quality standards and so on (innovation potential);

- production and sale, marketing factors: level of expenses for production, sales, marketing of innovative products; level of production and technical complexity of adaptation of new products et al. (production and sale potential).

2. External factors:

- market factors: consumer needs for innovative products, factors of demand for them (existing and expected price level, sales volumes of innovative products) etc. (market potential);

- *STA*: current technological level and that of technologies in the world, access to databases of know-how, discoveries, inventions and so on;

- *innovation infrastructure*: existence of the organizations, rendering services to ensure innovative venture activity, level of competition within the scope of a certain branch for access to limited resources, development of related branches, etc.;

- state (governmental) and nongovernmental programs of the innovative development: support from the state, international organizations (legislative acts, certification and standardization system, environmental standards in the state), preferential system for innovative enterprises;

- global problems of mankind: need to solve environmental, medical, demographic, food, space and other problems.

3. Group of random factors: probabilistic characteristics conditional on intuition, talent, new discoveries in the field of science and engineering etc.

O.E. Kuzmin and I.V. Lytvyn propose the dynamic system model of external environment factors influence (both direct and indirect action) on the venture organization (division) (fig. 8.2).

It is no coincidence that the model is shown as circular segments. Internal factors are on the border of the organization and surroundings that explains the influence of external factors on them and the organization as a whole. Internal environment factors are placed on the circle that proves that they affect each other. The circle reflects a significant amount of factors of influence on the venture capital firm. The literary sources analysis allowed to reveal that the most significant influence on the venture organisation is rendered by four groups of internal environment factors which on the circumference are shown by circles [12; 19; 28; 45; 53; 58; 68; 78; 81; 96-99; 101-104; 113-115; 118; 122-124; 144-147].

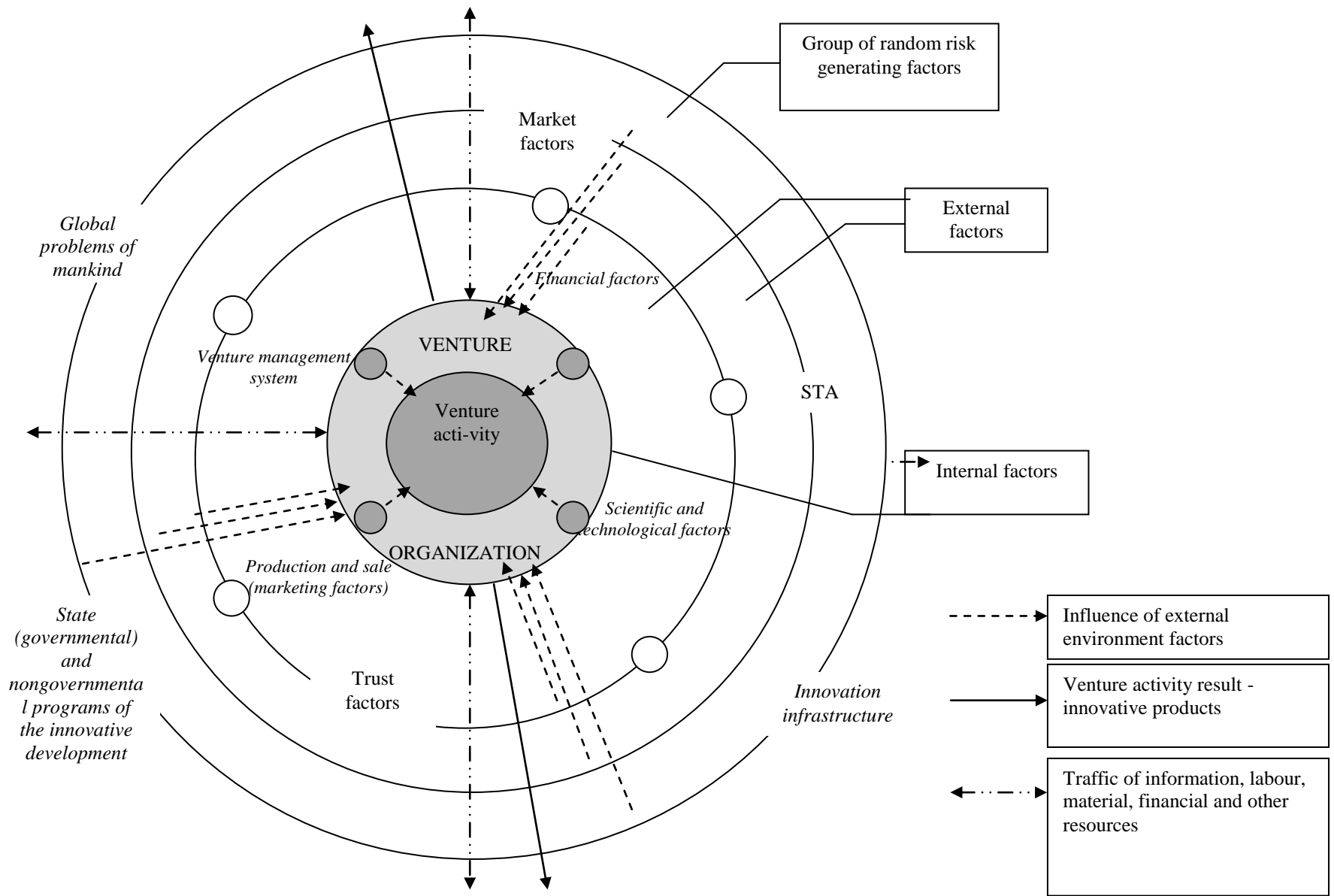


Fig. 8.2. Dynamic system model of external environment factors influence on the venture organization

Venture management system include: planning subsystems (mission, goals, innovation policy, development strategy), organization (adaptability of organizational structure to surroundings), motivation, control over and regulation of venture activity; efficiency of management methods use, that of venture administrative decisions, system of communications at an enterprise, venture managers' professional skills and leader abilities et al.

The need of separation and detailed elaboration of group of factors "venture management system" is caused by importance of the account of these factors as venture activity management efficiency directly depends on them as well as possibilities of development and introduction of innovative production.

We propose to understand as group of factors "venture management system" the following factors of influence on the venture activity (fig. 8.3):

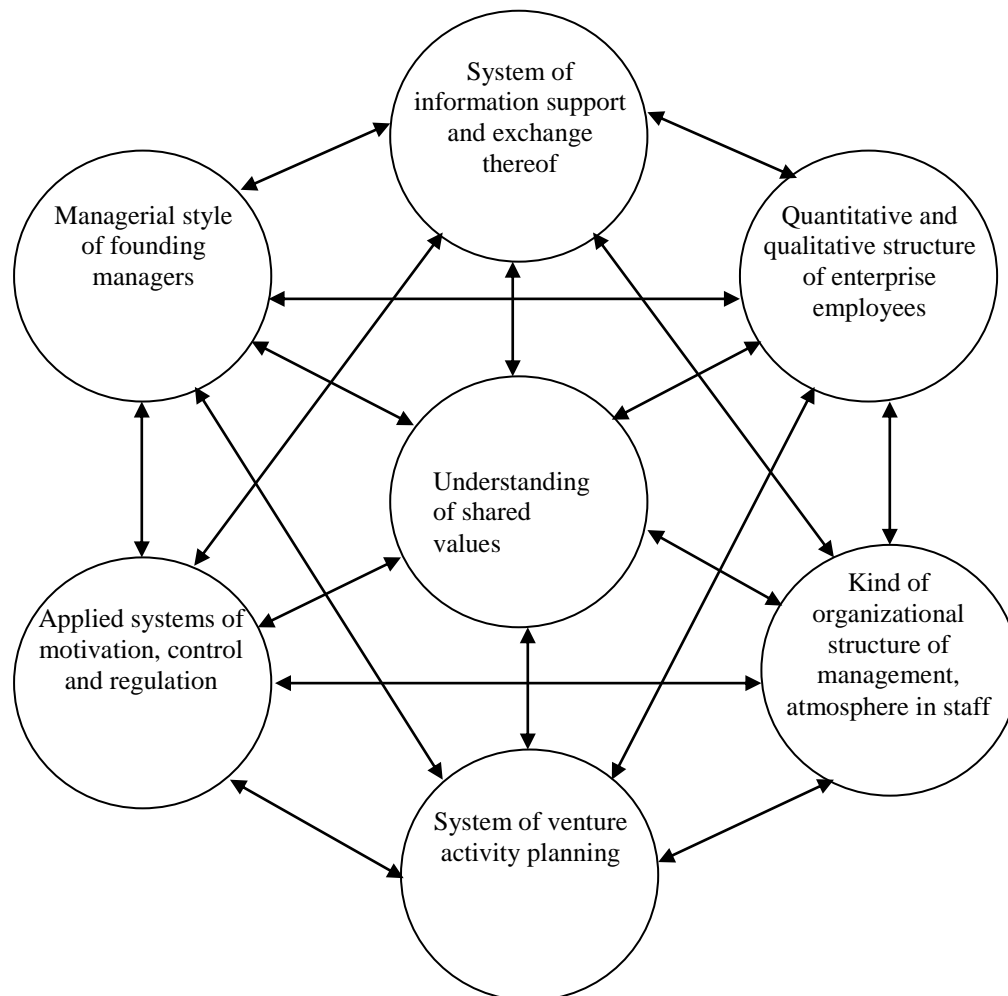


Fig.8.3. Groups of internal environment factors - determinants of "venture management system" of the dynamic system model

- Managers – founders of the venture organization: their professional level, knowledge, management experience of venture projects, polyfunctional abilities, managerial style, power forms they use and so on.

- Enterprise employees: qualifying and occupational structure, their experience, knowledge necessary to conduct scientific and technical researches, to make data analysis; ability to carry out research, to define tasks accurately, to make managerial decisions and to achieve purposes and tasks; observance of principles of the venture activity.

- Type of interrelations among employees, a kind of organizational structure of venture organization control, atmosphere in staff of inventors and developers of novelties.

- Status of venture activity planning system that provides for: ways of technical and design implementation of plans; marketing researches and monitoring of changes of needs and requirements of clients; protection of the received intellectual property objects; expenses and definition of requirements by the venture project stages; attraction of venture capital sources; alternative venture funding sources of innovative activity (factoring, trade credits, bridge financing); targeted use of financial and other resources; cash flows of the venture project and ways of investors' exit; network planning of achievements of the concrete intermediate and final goals of the venture project; stage-by-stage growth of cost of the venture organization and possible remunerations of venture investment participants; ways of creation of potential venture strategic alliances, entry in innovative clusters which would increase potential of venture enterprise growth.

- Status of system of motivation, control and regulation of the venture activity: changes of schemes of control and motivational mechanisms depending on the venture project stages.

- Status of the system of venture activity information support. In the conditions of environment variability it is important to receive promptly the information, to establish accurate communication connections among all venture project participants, and that demands creation of information centers with an open access to databases of various kinds of information of all participants of the project.

As the venture organization is in the space of the dynamic changed environment, external world factors may influence both directly and indirectly on it. The isolation of external environment factors which directly influence the organization, and also indirect ones which influence it by means of external direct action factors, is sketched as the circles located at different distances from the centre of the model. External factors of direct and indirect action are not set off at the model, but are grouped from the point of

view of their main incentives to achieve venture organization competitiveness. That is they are presented by determinants of venture activity success, making stimulating impact on establishment (beginning) of such activity.

As a result of the analysis of external environment factors we distinguish main determinants (stimulating factors) of the venture activity. They (fig. 8.2) are shown on the circumference by the circles – determinants. Let us remind that they are: 1) market factors; 2) STA; 3) innovation infrastructure; 4) state (governmental) and nongovernmental programs of the innovative development; 5) global problems of mankind.

Taking into consideration, that the determinants consider external environment factors of direct and indirect effect as well, at the model they are put on the border of the circles of external environment factors of direct effect (closer to the center of the model) and those of indirect one (farther from the center of the model).

The review of the literary sources [89; 90] has led to the need to consider one more factor of venture activity success – trust. It should be understood as a subjective belief in probability of a potential partner's honest conduct. They distinguish common and personal trust. Variant of the common one – trust between groups of persons (controlling and controlled systems, investors and group of managers who want to attract investments and so on). Application of the factor of trust among entrepreneurs is connected with the use of "social capital" concept. A strong positive link is observed between an economic growth of a venture capital firm and trust level as well as between investors and enterprise management. Establishment of confidential relations between partners is especially important in countries where they rarely fulfill normative legal acts and decisions of judicial and legal system. The trust concept is topical for the risk entrepreneurship. Some scholars of the American Academy of Political and Social Science believe that the trust factor for the post-Soviet countries - key in entrepreneurship success [157; 158]. As it is possible to consider the trust factor as both external and internal, at the model it is shown between the external and internal environment factors.

Considering the specificity of venture activity realization, separation of only factors of internal and external environment is not sufficient to describe a large number of factors of influence on this activity. Significant risks, and also possible high level of losses in the course of such activity, predetermine the account of the factors, which importance and hence, degree of influence on venture activity success as well, are not permanent, i.e. at some stages this influence is insignificant, and at others – determining. As dynamism or time factor plays an important role in the course of definition of

influence on the venture activity, individual factors are not included at the certain time periods in the group of the earlier singled out factors (determinants), which influence is undoubtedly essential. Therefore the need emerged to separate the group of factors having probabilistic degree of influence on the venture activity depending on time during which such activity is carried out. This group can include factors of both internal and external environment, but, considering unstable influence in different time periods of such factors, the circle of motive forces is placed the farthest from the center of the model. It is possible to explain this arrangement by influence of such factors on preliminary defined groups of internal and external environment factors too. As factors are probabilistic and dynamic by their influence in time, they got the name group of casual risk generating factors.

So, the need of venture researches can be caused by some new facts from surroundings. These are new discoveries in the area of science and engineering which stimulate further venture researches. This fact and unsuccessful results of venture researches in some direction, caused by contingencies, combination of circumstances, intuition, inventors' talent that favor achievement of successes in an adjacent direction of researches of the venture activity, differing from planned, but having own scientific, practical value and novelty aspects. Into the group of random factors it is possible also to include the need to solve new problems of the public life connected with occurrence of previously unknown facts or threats for mankind as a whole. The group of random factors is the remotest from the center of the model as they influence the venture activity through the external environment factors, and also indirectly by means of them – on factors of the internal environment factors of the venture organization as well.

The influence of internal and external environment factors on the venture activity (venture capital firm) is graphically presented by arrows. Besides, the model reflects exchange flows of information, labor, material, financial and other resources with the external environment that is typical of every open system. The outcome of venture organization operation – innovative products brought to the market for the concrete consumers.

8.2. Venture and corporate management

Detailed examination of the venture organization – control object – assumes the need to specify the venture management concept, reveal of special features and its differences from the corporate one.

Venture management – purposeful impact on the staff of employees or individual executors to ensure the process of creation and commercialization of results of scientific research and development, rollout in the market of new competitive technologies, goods, services, achievement of concrete organization goals, control of innovation risk projects of venture enterprises.

From the functional viewpoint venture management is process of creation and commercialization of results of scientific research and development, innovation projects realization directed on getting of new hi-tech products, ensurance of achievement of concrete goals of the organization using planning, organization, motivation, control over and regulation of innovative risk activity.

Study of the scientific sources [68; 157; 158] and authors’ own research allow claiming that there are distinctions between the venture and the corporate management. The basic differences between the venture management, typical exactly of "pure" ("independent") ventures and the corporate one are given in table 8.1. Let us note: the corporate management assumes control of organizations that have been operating in the market for a long time and the venture one provides for making of the administrative influence on young fast-growing organizations.

Table 8.1.

**Comparative description
of the venture and corporate management**

Comparative criterion	Corporate management	Venture management
1	2	3
General direction	Ensure the stability through support of competitiveness of the company, its production	Orientation to changes, constant search for possibilities of perfection and radical changes
Innovative direction	Development and introduction of improving innovations providing for modernization and improvement of both goods and services	Development and introduction of innovations with no market analogues
Approach to innovation projects control	Application of the business administration based on three limits in project control, - expenses, terms, results	Use of business systems as new entrepreneurial attitude to projects control, transcending the triple limitation as the project is considered with account of possibility to increase economic (added) cost of the company

Information support of the management process of management	Constant regular gathering of the facts, their methodical analysis. Centralized services of getting, processing and analysis of the information	Information is collected according to the principle "at the moment". Use of experiments when getting the information, quick adaptation to changes of surroundings. Formation of the open and distributed information system
Predictability of results, management of risks and changes in the organization	Results are rather predictable. Formal procedure of management of changes in order to avoid risks and failures under any conditions	Results are unpredictable. Quick adaptation to external environment changes, implementation of changes in the organization. Assumption of risks and probable losses in order to experiment, adapt and learn (by trial and error)
Use of production factors	Standardization of works and requirements to manpower, saving of the limited financial resources, use of economies of scale. Employees are considered as the company item of expenses.	Use of works to meet the client's individual requirements. Attraction of a flexible professional labor force, formation of multifunctional teams. Limited resource is skilled employees comprehensively versed in various areas of activity whom the firm considers as investments into the future
Organizational structure of management	Hierarchical pyramidal structure of management with precise authorities and responsibility, goals and subgoals of individual executors (individualistic orientation)	Linear (network) structure of management providing for establishment of informal confidential relations in the collective, favors formation of employees' creative approach, of atmosphere of creativity and is capable quickly to adapt and perceive the external environment changes
Managerial decision making	Vertical managerial decision making (top to bottom), that demands both efficient control over and responsibility of persons who make and execute such decisions. Managerial decisions are made and confirmed slowly, with observance of formal corporate procedures	Control with attraction of employees to managerial decision making process that leads to formation of internally conscious self-organization with corresponding authorities and self-check
Justification of company employees	Climbing up the social promotion ladder	Scheme of payment for risk which includes share in profits, partnership property
Conditions of achievement of positive results	Harmonious performance of functions and methods of the management, delegation of authorities and responsibility for achievement of the organization goals	Entrepreneurial independence, trust, room for decision making, ability of the firm to a rapid transition from the idea to sale of a finished product in the market

Criteria of success of innovative activity	Criteria of success – implementation of the activity plans, ensuring of improvement of quality of products that is more important than time (speed) of development and introduction of innovations	Criterion of success – study and meeting of yet unmet needs of consumers in the best way, creation of customers’ daily wants by recommended new goods and services. Time (speed) of market entry is the primary task
Sources of finance of activity	Approved annual company plan	Venture capital
Main financial indicator of efficiency	Profit received by the company from its activity	Flow of funds and increment of the company value through its capitalization

So, summing up, let us remind once again: the venture organizations are open systems which are under the influence of internal and external environment factors.

Basic internal factors, which can create essential obstacles in success achievement by the venture organizations, are system of the venture management, financial and scientific and technical, production and sale and marketing factors.

External influence factors are grouped as follows: market ones – consumer needs in innovative products; factors of demand for them – existing and expected price level, sales volumes of innovative products and so forth (market potential); STA – existing technological level and that of technologies in the world, access to databases of know-how, discoveries and inventions etc.; innovation venture infrastructure – activity of the organizations rendering services to ensure the innovative risk activity; level of competition within the limits of a branch for access to the limited resources, development of related branches. The external factors also include state (governmental) and nongovernmental programs of the innovative development: support from the state, international organizations (legislative acts, certification and standardization system, environmental standards in the state), preferential system for innovative enterprises; global problems of mankind – necessity to solve environmental, medical, demographic, food, space and other problems et al.

A lot of risks, as well as a possible high level of losses when one carries out such activity, predetermine the account of the factors, which importance and hence, degree of influence on venture activity success as well, are not permanent, i.e. at some stages

these factors render insignificant influence, at others - they essentially effect the development and control of the venture activity on the whole. As dynamism or time factor plays an important role in taking into account of influence on the venture activity, individual factors are not included at the certain time periods in the group of the earlier separated out factors (determinants), which influence is undoubtedly essential. Therefore the need emerged to separate the group of factors having probabilistic degree of influence on the venture activity depending on time during which such activity is carried out. These random factors – probabilistic characteristics conditional on intuition, talent, new discoveries in the field of science and engineering, trust et al.

Detailed study of the venture organization as control object led to specification of the venture management concept that is exactly what we considered in the preceding material.

Test questions and tasks

1. Tell about significance of the venture activity in the innovation process.
2. What factors of influence on the venture organization do you know?
3. Analyze random factors of influence on the venture capital firm.
4. What does the venture management study?
5. Describe the venture management from the functional positions.
6. Tell about the main differences between the venture and corporate management.
7. What role does the trust factor play in the venture activity?
8. Reveal the essence, interrelation and influence of factors of the determinant "system of venture management" on the venture activity.
9. Define the nature of influence of both external and internal factors on the venture activity.
10. Explain, using examples of the system approach application the influence of the internal and external factors on the venture activity control.

9. PECULIARITIES OF ENTERPRISE MANAGEMENT SYSTEMS CREATION AT INTERNAL SCHEME OF VENTURE FINANCING

9.1. Venture financing schemes. Internal corporate venturing

At different stages of venture business development various schemes of investment of the venture capital investment became widespread – internal, external, "independent". Let us consider in more detail peculiarities of application of internal schemes of the venture financing, as well as the forms of internal venture entrepreneurship.

Within the frameworks of the internal scheme of venture financing the organizations are formed which in the venture business area are called *internal ventures* are temporary or constantly operating divisions (groups) of large industrial companies as well as relatively independent spin-outs or subsidiaries spin-offs which get the venture financing from venture capital funds established within them and are intended for selection and improvement of perspective, from commercial point of view, production ideas, their realization and introduction. Researches of practice of functioning of the ventures in different countries of the world let draw a conclusion that there is a variety of forms of the ventures organization.

The basic forms with the help of which internal schemes of venture investment can be realized, are:

1. Creation of internal venture divisions, risk groups.
2. Creation of organizations similar to the spin-out and the spin-off.
3. Creation of affiliated venture capital funds (venture capital companies), occupying themselves with search, selection and financing by means of direct investments in young innovative firms. Such funds are called "relatives"; they can finance internal, rather independent venture divisions, as well as put means into independent small technological innovative companies (STIC).

The majority of the successful companies expanded their activity, introduced new processes and operating procedures owing to corporate venturing.

Internal corporate venturing is the process of creation, incubation and developments of internal venture enterprises in ward of a large parent company. Among the basic methods of the innovative entrepreneurship of companies it is the most effective one of corporate business. Organization of innovative activity by creation of joint ventures, takeover of existing small innovative firms proved to be less effective in comparison with internal ventures creation.

Among the forms of corporate venturing the most widespread are internal ventures as subsidiaries – spins (74% of multinational corporations) whereas only to 17% of the companies dealing with the venture activity adhere to the strategy of formation of internal venture groups; 9% of corporations create hybrid forms of ventures, combining their own abilities with subsidiaries of other corporations, that is participate in external venture entrepreneurship [152].

9.2. Internal ventures in the form of risk groups and departments of companies

Principal causes of lagging of large enterprises as for quantity and quality of innovative solutions behind small firms consist in that that they mainly adhere to bureaucratic conservative approaches to scientific research, run less risk during realization of innovation processes and therefore they are more inclined to development of improving innovations of existing goods. The large companies to ensure flexibility of reaction to external environment changes and effective search and development of innovations find the ways to activate their innovative activity [81, p. 29-30]. Such directions of solution of problem questions of stimulation of innovative activity at large enterprises include creation of venture research divisions (groups). These groups with a relative budgetary and creative independence, informal interpersonal relations within a group ensure an active creative search for innovative ideas, their development and implementation.

Risk groups and departments of companies are some sort of initial evolutionary forms of “traditional” ventures. Despite contradictions regarding belonging of such departments to ventures, considering that they attract the venture capital in its narrower sense, but can ensure the rights of investors’ stake in ownership of potential enterprise created from such department employees, there is a proposal to put them into the internal ventures.

Let us consider peculiarities of organization of internal venture divisions. To make the internal ventures more independent they are created as design, temporary creative groups intended for solution of concrete innovative problems, or in the form of matrix management structures whose members are subordinated both to the project manager and heads of those functional departments where they permanently work [88, pp. 81-87]. O.E. Kuzmin and I.V. Lytvyn have developed the typical organizational structures of risk group management (fig. 9.1, 9.2).

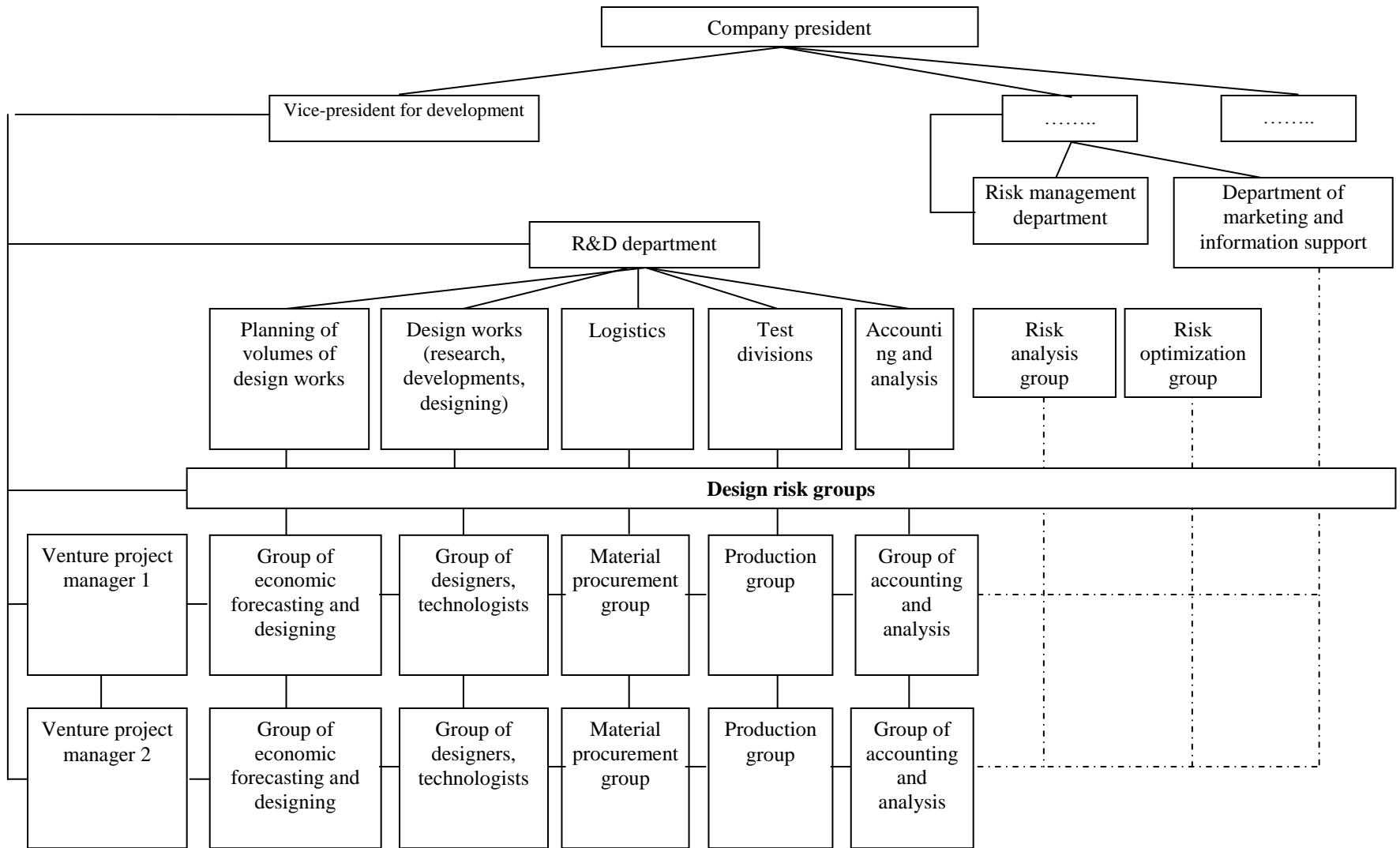


Fig. 9.1. Matrix structure of R&D process management when creating design risk groups

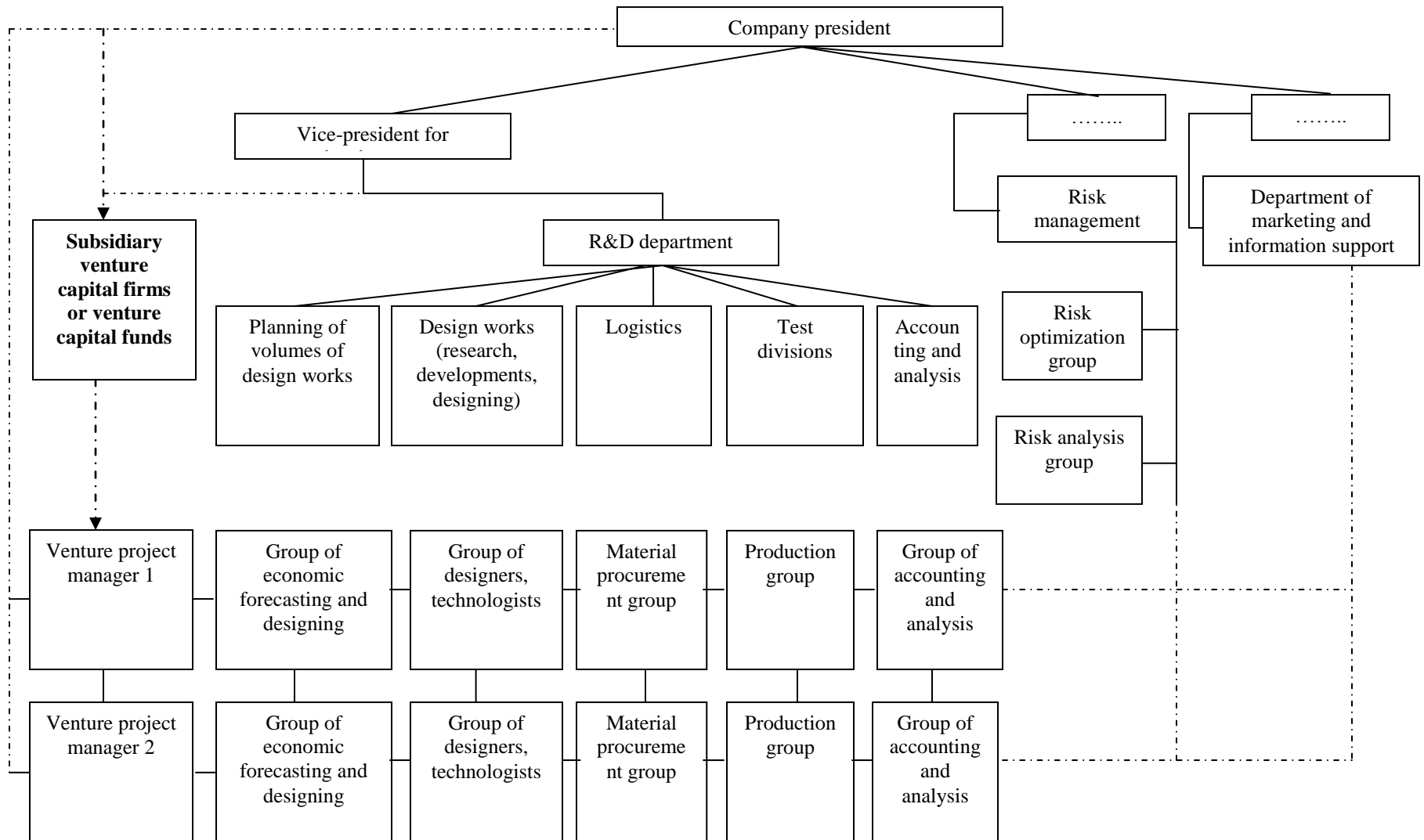


Fig. 9.2. Design structure of R&D process management when attracting subsidiary venture capital firms

Special features of such venture structures [12, p. 356, 359] is an extensive participation of specialists in decision making, a direct contact within a group, a mutual trust, understanding of the fact that the project manager – work coordinator, an adviser, instead of a representative of ruling control system. Organization of risk departments on such principles assumes formation of atmosphere of creativity within the group. Creative people have given themselves up to work, realize the heart of problems, are perceptible to ideas, correctly evaluate them, prefer the free unplanned researches which can be stopped swiftly and pass to search for new alternatives of the ideas. One of the reasons of the success of risk departments (groups) in generation of ideas and development of variants of their implementation – they need small material costs. Processes of generation and development of innovative ideas demand insignificant financial expenses in comparison with other stages of innovation processes, but then – a lot of psychological creative efforts. Inventors' creativity, psychic income, possibility of self-realization are much more important than financial remuneration, therefore under such conditions the innovative activity at STIC demands less compensatory financial expenses from workers of large enterprises [152]. However there emerge needs for other kinds of resources. Such processes, for example, demand involvement of competent and talented specialists, formation of adequate measures of stimulation inventive activity and so on.

The internal ventures in the form of design risk groups are created at large companies as temporary groups of scientists, engineers, representatives of production divisions, employees of marketing and sale department, that of information support and specialists in the analysis and optimization of the risks meant to estimate and select commercial production ideas. Such temporary groups can also solve some organizational or technical questions of the company, and cardinally new innovation questions connected with basic innovations creation and getting of marketing outlets new to the company.

To get the permission to realize the certain company employee's ideas, the project team is created that includes the author of the idea. The group members evaluate the idea from the point of view of the commercial appeal, predict requirement for the novelty and its prospective market demand for it, technical, material, financial, labor and other resources necessary for development of the idea volumes of research work, and accept or reject the author's offer to finance research. Design groups when selecting the innovative idea adhere to the requirement: the project should solve the problem of expansion of new abilities of the enterprise that is promoting the entry into markets new to the company [81, pp. 39-40].

The drawback of internal ventures creation is that inventors and innovators in the existing organizational structures are restricted in their behavior and enterprise actions within the organization environment. Formal control of the parent company interferes with the free entrepreneurship. It reduces innovative activity, creative activity and, moreover, creates conditions for the management by directions of innovative research. The venture managers' limited abilities encourage managerial decision making process by criteria of their conformity to the corporate aims and strategy of parent company development and the venture entrepreneurship does not agree with freedom restrictions in selection of directions of development and decision making.

The success of internal ventures depends on many factors. The western scholars' researches prove that the human factor, including venture managers' personal and professional qualities especially for internal ventures, can make a positive effect on results of the activity of such divisions. As scholars' investigations indicate, the leaders of innovation venture projects should be able to apply actively expert, charismatic and administrative forms of the power.

The manager's education, knowledge, operational experience in the entrepreneurship area, ability to make managerial decisions to initiate, restrict or stop the certain actions will ensure the expert power over employees of ventures. The post and expansion of formal authorities through internal ventures autonomy will provide legitimacy of project managers' power. Scholarship, leader and other charismatic qualities allow influencing by means of the power of example. All these forms of the power in a combination to others ensure increase in chances to achieve the venture activity success. The manager's high office will ensure establishment of business connections with partners of the venture, creation of networks within the parent company and outside its limits. Elite education, experience, knowledge will increase respect, significance of the manager, favor the best positioning of such head in the business environment. That opens up possibilities for communications with a wide range of potential counteragents.

Positive results of internal venture capital firms favor gradual reduction of the formal control from the parent company, increase trust to employees of such venture and help to promote the venture project manager.

So, researches confirm, that the human factor, in particular in the venture entrepreneurship area, is essential. So, venture managers' individual traits are of great importance for corporate ventures growth. That is why the parent company management should pay significant attention to the process of appointment of managers of internal ventures [94; 95].

The risk groups are financed due to the principal activity of the enterprise from its special funds (of development, innovation) or venture capital funds which are subsidiaries of the parent organization. That allows minimizing dependence of the internal venture departments on the aims of extensive manufacturing of products, ensures achievement of the required concentration of human, material and financial resources for solution of the tasks of the venture. Besides the company funds, the risk groups use personal cash resources of the authors of ideas, engineers, developers, designers, managers, that is the staff of risk department of the enterprise. Venture departments during the Soviet period have existed for a long period of time in the form of development bureaus or scientific production associations [81, p. 37; 115, p. 173].

Complication of construction of the venture management systems and creation of the internal ventures at enterprises consists in overcoming of both conservative and bureaucratic approaches to the innovative ideas selection. The important criterion of selection of the risk directions of research at large enterprises is conformity and affinity of the branch (market), where the internal venture division is going to operate, with the general direction of the enterprise activity. Under such conditions a company can get the synergetic effect through provision of a high production and sale potential (availability and use of joint marketing and sale systems of the innovative activity control and so on).

At the stage of formation of strategy alternatives of realization of the company innovative goals there is a search for ways of realization of the strategic innovative goals. They also make estimations concerning the method of introduction of the innovation – develop scientific and technical products by themselves or to purchase patents and licences for inventions. Such estimations provide for definition of requirement for financial, labor, material and other resources for realization of the chosen form of development and introduction of innovations.

Advancement of innovative ideas is caused by the need to search for new ways of satisfaction of consumer requirements, get competitive advantages and so on. For each certain idea they frame the concept, make project technical characteristics, analyze various components of its efficiency, and consider an actual marketability of projects and the main organizational actions directed on their introduction. All these projects – alternatives of the solution of the innovative goals of the company, but they are evaluated in more detail at the stages of routine planning or designing of innovations. This stage is a labor intensive, rather long and important as demands marketing research of projects of the ideas and their concepts.

9.3. Organizations like spin-out and spin-off – forms of internal venture entrepreneurship

The forms of intracorporate venturing have undergone the certain evolution throughout their development. The inventors offering the ideas of projects who do not provide achievement of the innovative goals of the company, mismatch its innovation policy and directions of research, face the choice – realize the innovative ideas which the enterprise agrees to finance, or to choose a way of independent enterprise activity and to search for its possible funding sources. For the purpose of removal of disadvantages of the internal venture groups, that is the deviation of the perspective innovation projects mismatching directions of the enterprise principal activity, inventors and entrepreneurs usually create the venture organizations.

Thus, the evolution of the internal ventures into self-contained ("gemmated") venture enterprises became the following step to gain more of creative and financial independence. At the present stage of venture entrepreneurship development the internal venture divisions lost popularity at large companies. They were replaced with new forms of the internal ventures – separate venture enterprises spin-off and spin-out. They may include enterprises formed by separating inventor-employees from the parent company. They can emerge as a result of turning of rather independent internal risk groups into spin-off and spin-out companies.

Spin-out as already mentioned, - a new enterprise established by inventor-employees of the parent company. It by means of concluded intracorporate agreements can use intellectual and material and manufacturing resources of such company, remaining rather independent in its innovative-creative activity. Such enterprise is though financially and operationally subordinated, but gets legal, financial and accounting support, access to results of marketing researches of the parent company and its sales channels. *Spin-outs* provide large enterprises with new products development, increase market capitalization of such enterprises. Sometimes these companies are related to corporate strategy of parent company development, directions of its innovative researches.

Spin-off – a new subsidiary established by way of separation of large company employees for a commercial use of results of know-how and both received and developed technologies on the basis of the parent company. Enjoying the status of an independent legal unit, it can use parent firm resources. Such enterprise is more independent from the parent company regarding innovative searches and solutions as make researches in directions, different from the parent company main activity [25].

Spin-off and spin-out create bases of internal venture entrepreneurship within frameworks of a parent company.

9.4. Creation of subsidiary venture capital funds (venture capital firms)

The variant of the internal ventures – so-called program of financing of venture divisions from the intracorporate venture capital subsidiaries (venture capital funds). These funds (firms) are in property relations with the parent company, providing support to their “own” inventor-employees. Therefore cooperation between venture capital funds and innovative divisions is called the program of “relatives” [58, p. 45; 81, pp. 39-40; 134; 143, p. 80; 102, p. 91], and venture capital funds are called “relatives”.

Internal venture capital funds of corporations (“relatives”) are constantly operating divisions (enterprises of technology transfer) of large companies or the venture capital subsidiaries (venture capital funds), intended for estimation and selection of perspective innovative ideas and their financing from specially generated venture capital funds. Means from such funds are allocated by the company employees offering their ideas for realization. Besides, the employee on the basis of the intracorporate agreement can use the company production spaces, laboratory, lease the production equipment, use information services, hire employees at the department, and use other advisers’ services. Subordination of venture projects managers directly to the company president, possible dismissal of design group employees from those functional departments where their jobs are, in order to work only on the venture project also form the advantages of the program of “relatives” over risk groups.

Evolution of the internal ventures in the form of the “gemmed” venture enterprises like spin-off and spin-out foregrounded offering and expansion of the required volumes, quality and kinds of new services for development of these young ventures. Therefore large enterprises, besides affiliated venture capital funds, create subsidiaries of technology transfer, rendering services of new technology licensing, creation of spin-outs, support for creation of strategic diversified partnership, those directed on estimation of the commercial potential of inventors’ basic research, of possibilities of licensing and protection of the intellectual property objects; financial and administrative experience for realization of the idea from the initial stage till the final market product output. Let us analyze the diagrammatic representation of the internal venture entrepreneurship as spin-off and spin-out (fig. 9.3).

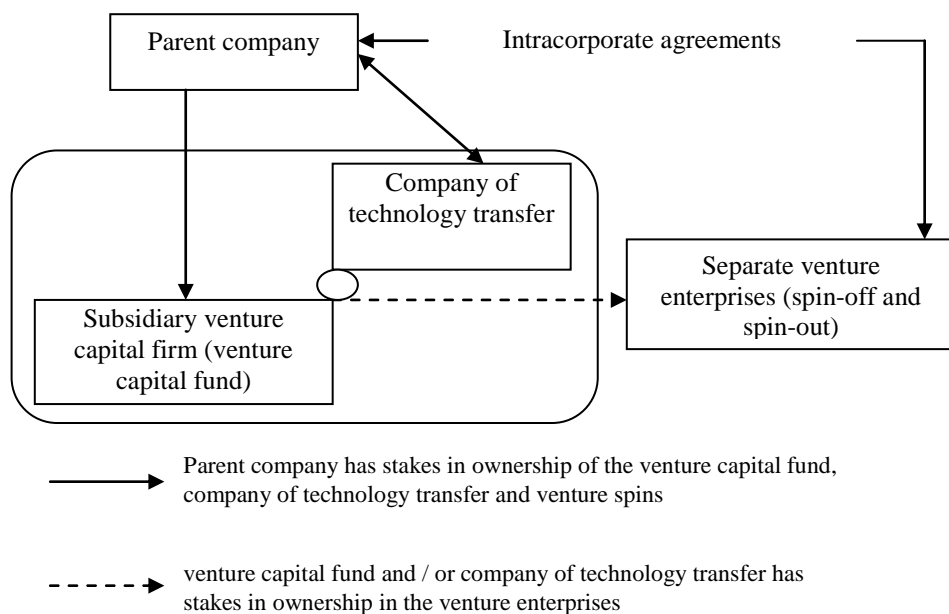


Fig. 9.3. Corporate connections among the companies involved in internal venture entrepreneurship ("gemmed" venture enterprises)

For the purpose of creation and development of the internal venture entrepreneurship at large enterprises in structure of venture fund they include the risk management group which consists of an investment committee, those of operational risks and financial ones. The investment committee is responsible for working out and making of investment decisions. The committee of operational risks sees to observance of the investment policy of the fund, fulfilment of agreements, working out and introduction of the actions directed on decrease of operational risks – avoiding of conflicts in the course of investment; observance of the legislation in the field of preservation of the environment and safety of living; company development through identification of threats and possibilities and working out of measures to remove probable risks; organization of forums to work out regulatory measures. The responsibilities of the committee of financial risks include monitoring of financial risks concerning attraction of means for replenishment of the venture capital funds, formation of quarterly reports according to the results of monitoring about fulfilment of plans on creation of cost of the invested companies being part of the investment portfolio of the venture capital fund.

Sometimes they create the structures of the affiliated venture capital firms combining functions of a venture capital fund and a company of technology transfer. The review of global practice of the venture entrepreneurship [178; 179] has confirmed that into organizational structure of the companies of technology transfer of large

industrial enterprises they introduce: a team of technology transfer, "new enterprises" service, a group of asset and investment managers that of business support. The team of technology transfer responsibilities – estimation of inventions by their commercial (market) potential; working out of strategy of managements of intellectual property objects; patent portfolio management, analysis and selection of forms of technologies commercialization by means of licensing or management of enterprises created by spin-out; marketing licensing and so on. Generalization of scientific research allows asserting, that "new enterprises" service promotes an incubatory support of the mentioned firms at early stages, controls them, and searches for possibilities of their development. The group of asset and investment managers carries out administration of parent company shares in the spin-out, being at late stages of development. The business support group includes financial managers, lawyers, patenting and licensing managers, and marketers, managers for HR and administrative issues and IT managers. They supply with the necessary manpower young firms, offer various administrative, financial, legal services and those in the information management. To create a spin-out the company of technology transfer should have special directors and managers for commercial issues with an operational experience in this direction.

Affiliated venture capital funds and/or companies of technology transfer of large enterprises promote an essential increase in the efficiency of innovation processes as have a number of advantages over risk groups. The first ones, for example, have already formed independent cash funds of the venture capital. If creation internal venture in the form of risk group provides reception of means from organizational developed funds "relatives" create funds of the venture capital which at first receive from a controlling company, and subsequently – from compensation for successfully realized venture projects. The remuneration of affiliated venture capital funds is directly connected with results of their activity. They mainly gain the income from participation in the company profits received thanks to introduction of innovations. The revenues replenish venture capital funds and allow realizing and finance venture projects.

The experience of successful companies in the venture business area indicates that in such organizations there are portfolio strategies for development of new ventures which cover five selection criteria of the venture divisions:

1. The type of business possibilities. The attention is focused on the area where a new venture plans to operate: the main or related industry connected with the principal directions of the parent company activity.

2. The parametres of capital investments of the venture: ratio of levels risks-return on investment, the stage of development investment et al.

3. The level of operational involvement of the parent firm in the activity of ventures (operational control, financial, commercial and so on).

4. Commercial connections of new ventures with the main company business (stake in ownership of a new venture, degree of involvement of company assets).

5. Achievement of the related aims of the main company business. It provides for definition of possibilities for expansion of the parent company business depending on each stage of venture enterprise development [152].

Introduction of the existing ventures into the company structures, making the venture groups independent structures, creation of joint enterprises and internal infrastructural objects for stimulation of creative activity and support of ventures (incubators, universities, colleges, schools and so on) which are backed by companies, reflects the variety of corporate venturing forms.

Here is an example. The technological company "Lucent Technologies Inc." shows positive results of the corporate venturing participation. It created investment venture group "Lucent New Venture Group" (NVG) which finances venture ideas of its laboratory "Bell Labs", and forms cooperation alliances concerning marketing and sale aspects of introduction of innovations. In the venture group there are directors (chief administrators) expecting the announcement of projects. The adjusted schemes of incubation increase in ventures cost and exit processes confirm a considerable quantity of successful NVG venture business exits. At that those enterprises, whose results of activity are valuable to the parent company main business development, are bought from their founders and integrated into the structure of the company [152].

The factors predetermining processes of creation of subsidiaries (spins) include possibilities of:

- formation of the next venture strategy, business development of the parent enterprise focused on the entrepreneurial competence;
- construction of the enterprises opening new ways of development within the limits of the main business;
- adaptation, flexibility of forms of support and creation of conditions of competitiveness within the frameworks of new individual business venture models;
- increase in commercial value of the enterprises through attraction of means of both existing and new potential venture investors;
- finding, development and application of talents, career growth of employees of the enterprises.

The questions of organization of ventures operation deserve a special attention. Some researchers identify the following typical structures of ventures management within the limits of parent companies.

Corporate board or committee. The structure of these controls usually includes representatives of the parent company management, the holder of the idea (technology), and also directors of those organizations that provide an additional technological appraisal of the project. The competence of such bodies – guarantee of observance of new venture strategy as the imperative of new venture development, solution of the vital issues and problems in the process of development, search for new possibilities of attraction of financing and so forth. The controls are gathered as appropriate (once a month - once in three months).

New ventures board, regulation committee. Their structure can include managers of institutional and administrative levels – parent company employees or those of organizations - strategic partners of the parent company, including investment managers of firms of the venture capital firms, venture capital funds. This body ensures a consecutive process of new ventures control at simultaneous mutually advantageous relations with the main company business. The competence of the bodies includes the help in establishment of contacts, coordination and signing of agreements with business partners, participation and assistance in processes of making of administrative decisions of the venture. These controls meet at least once a month, as appropriate – oftener.

Individual (independent) board of ventures, advisory commission. Such controls consist of the group of managers specially employed by representatives from the parent company, and also external business experts in order to head new ventures. The responsibilities of these bodies – monitoring and management of the venture enterprise, active strategic consultations of managers the venture concerning directions of its development et al. Such controls are gathered as appropriate, but at least once in two weeks [152].

The named controls depending on the pattern of ownership and methods of creation of ventures adhere to various criteria of investment. Corporate boards aspire to reach synergies with the fixed assets of the parent company, the independent ones – internal portfolio synergy, domination in the market. Complex forms of organisation of the corporate venture groups require a strong team of managers as are accompanied by significant risks of shortage of experience in the venture business development.

Having analyzed researches on the subject of the venture entrepreneurship [152; 161], we come to conclusion: goals of the new internal ventures are essentially different from those of the parent company of the venture. The parent enterprises are focused on

the maximum and quick profit earning. They operate in the mature markets with mainly strong competition for consumers; therefore pressure of the market and competitors provokes getting maximum incomes in the short-term prospect. New venture formations pursue a course of creation of cost and long-term return on investment through capitalization of means at the moment when one exits the business. They require flexibility for growth and are less dependent on the branch where they operate and which is usually at either development or origin stage.

The different goals arising before parent companies and internal venture groups can cause conflicts of interests between the business core and new venture formations. The parent company managers are interested in protection of their own brand, distribution channels, networks and investment assets; do not want to lose their talented employees. The venture group is focused on use of the maximum stimulus for their growth, application of flexible schemes of hiring of staff, search for employees with new knowledge to reinforce the venture groups with the intellectual capital.

As research indicates, the process of creation of corporate ventures has the following stages: generation of ideas; concept development; business planning; incubation and/or commercialization; market value "winning". Construction of the venture enterprise demands to choose partners for creation of alliances, recruitment and training of staff from the venture business area, approval of business and engineering procedures of the project, organization of intellectual property protection, working out of scenarios of its growth, creation of a business concept and a legal entity, formation of plans of contracts with suppliers and potential clients, plans of marketing and sales, the plan of communications among partners etc. That is why existence of the internal venture structures which would render the mentioned services, and qualified personnel in the parent company guarantees achievement of corporate venturing efficiency [152].

If spin-offs are created provision of incubation processes of young enterprises and rapid searches for external venture financing acquires a special importance for ventures development. In the companies having in their structures corporate incubators, teams of venture managers can accelerate the process of formation of ventures, getting advantages to growth and development of young firms in return.

The human factor in the venture business has key importance. Scientists and researchers from the venture business sphere emphasize the importance for managers from the board of directors of ventures, to get except economic and/or legal, technical training as well. Complicacy in search for such managers reduces chances of development of venture firms. In this sphere the significance of highly skilled staff employment agencies – headhunters – is growing. Let us notice, that the susceptibility

of companies to creation within their own structures of the venture structures in many respects depends on their corporate culture and management system. There are no uniform organizational structures of management of ventures which proved to be efficient. The various companies use their own models of venture business. However direct participation in the venture business opens companies the way for experiments in search of new forms of corporate growth. The modern venture schemes of organisation of innovative activity will serve as prototypes of organizational structures of management of corporations of the future [152; 157; 158].

Thus, in the history of venture entrepreneurship development three schemes of venture financing of the enterprises – internal, external, "independent" are known. We have considered the special features of organization and planning of the venture organizations activity using the internal scheme of venture financing. Let us remind: the basic forms internal венчуров - creation of the internal venture divisions, risk groups; emergence of the organizations like spin-out and spin-off; formation of affiliated venture capital funds (venture capital companies). All these organizational forms of the ventures are planned and realized within the limits of the internal venture entrepreneurship or the internal corporate venturing.

Risk groups and departments of companies are initial evolutionary forms of "traditional" ventures and the simplest form of the internal ventures. These groups with a relative budgetary and creative independence, informal interpersonal relations within a group ensure an active creative search for innovative ideas, their development and implementation. Such internal ventures are created as design, temporary creative groups intended for solution of concrete innovative problems, or in the form of matrix management structures whose members are subordinated both to the project manager and heads of those functional departments where they permanently work. The risk groups are financed due to the principal activity of the enterprise from its special funds (development, innovation funds) or venture capital funds being subsidiaries of the parent organization.

The further evolutionary form of the internal corporate venturing – venture organizations spin-out and spin-off - "gemmated" venture enterprises which were formed as a result of separation of inventor-employees from the parent company.

The variants of the internal ventures include so-called program of financing of venture divisions from the intracorporate venture capital subsidiaries (venture capital funds). These funds (firms) are in property relations with the parent company, providing support to inventor-employees of this company. Internal venture capital funds of corporations ("relatives") are constantly operating divisions (enterprises of technology

transfer) of large companies or venture capital subsidiaries (venture capital funds), intended for estimation and selection of promising innovative ideas, as well as their financing from specially generated funds of the venture capital.

For the purpose of creation and development of the internal venture entrepreneurship at large enterprises in structure of venture fund they include the risk management group which must include an investment committee, that of operational risks and financial one. Sometimes parent companies create the structures of the affiliated venture capital firms combining functions of a venture capital fund and a company of technology transfer.

Test questions

1. What schemes of the venture investment do you know?
2. Define "internal ventures" concept.
3. Name the forms of internal venture entrepreneurship.
4. What is "corporate venturing"?
5. What forms of the corporate venture entrepreneurship are most widespread among large international corporations?
6. Analyze the evolution of internal venture entrepreneurship forms. Why did some forms of ventures loose whereas others acquired popularity in recent years?
7. Tell what the point of the "relatives" program is.
8. What is the difference between spin-off and spin-out?
9. What services do affiliated companies of technology transfer offer to the internal ventures?
10. Explain the mechanisms of the interaction of venture entrepreneurship subjects involved in "gemination" processes of the venture organizations.

10. APPLICATION OF “INDEPENDENT” VENTURE INVESTING SCHEME

10.1. Peculiarities of "independent" ventures creation

Application of “independent” venture investing scheme provides for creation and emergence of “independent” ventures – small innovative enterprises. They have scientific and technical knowledge or the developed designs of new items; have significant growth potentials. The independent ventures receive the venture capital from private investors as well as professional venture capital funds (venture capital companies) in exchange for a part of property (usually less than controlling interest) of such enterprises, which become not only direct investors, but also strategic business partners interested in fast accretion of cost of such enterprises through their participation in realization of projects of development and commercialization of innovative products.

This name indicates if only the independent initiative beginning of activity and creation of a small innovative enterprise by inventors, innovators. That is at the stage of formation of the innovative enterprise it is rather independent from other venture entrepreneurship subjects. Such enterprise cannot be called the venture one until it gets the venture capital. While getting long-term direct financial investments of share nature innovative enterprises turn into ventures. Such kind of investments are put mainly for 3-7 years by individual and institutional investors (venture capital funds) into young innovative enterprises in exchange for shares of property of such enterprises (usually less than controlling interests, but simultaneously ensure investors the rights of running the invested enterprises and the financial control over target use of funds). Thus, the concept "independent" ventures can be considered rather contradictory as for its name: as already mentioned the venture enterprise is relatively independent at the early stages of its development when a significant control over the property of such enterprise and administrative process belong to its founders – inventors. Along with the venture enterprise development (depending on quantity of rounds of such financing) the founders gradually lose a significant share of the ownership (controlling interest), and administrative functions concentrate in venture capitalists.

To get the venture capital, small innovative enterprises should have a significant growth potential of their market value and possibility for investors to exit the business through sale of their shares in the property.

10.2. Basic stages of "independent" ventures creation as well as financial provision of their investment projects realization

Let us consider the basic stages of "independent" venture creation. These are:

1. Intellectual property definition that allows developing new products, works, services which are in great demand in the market.
2. Drawing up of the business plan of project of commercialization of scientific and technical knowledge, completion of pilot samples etc.
3. Search for potential investors. Distribution of business proposals.
4. Negotiating. Mutual estimation of potential partners. Project appraisal.
5. Attraction of investors. Conclusion of an agreement on venture financing of the project. Conversion of an innovative enterprise into a joint-stock company.

The stage of conclusion of the bargain for investments is very important and labor intensive. The agreement should contain the following information:

- price of the deal;
- restrictions on the use of capital and remuneration of labor of managers;
- circumstances under which the venture capitalist can get the control over the board of directors, substitute the company management, merge the company;
- terms of sale of shares in the open market etc.

When investing the venture capital in the constituent fund of a small innovative enterprise the investor does not consider expedient to purchase the controlling interest, and uses money as the financial leverage of influence on the management of enterprise to ensure its rapid development. Therefore neither the investor nor one's representatives do not take other risks (technical, market, administrative, price and so on), except for the financial. The enterprise and its managers run all enumerated risks.

6. Formation of team of managers. Venture investors or their representatives sit on the board of directors of the venture enterprise.

Further "independent" venture enterprise is run by the well-established board of directors for the purpose of realization of the venture project and achievement of market capitalisation of the enterprise. In any case irrespective of that, whether the enterprise will achieve the planned sale volumes of innovative products, market value, venture investors exit the enterprise in some period of time. This procedure is called exit. It can be made in the following basic forms: initial public offering; sale of shares to the strategic investor or financial investors (other venture capital and direct funds of investment etc.). Irrespective of efficiency of realization of the innovation project in the

end of term of venture investment there is the "independent" venture enterprise liquidation.

The liquidation strategy mean not the declaration of the enterprise the bankrupt and termination of its activity (though such variant is possible too), but investors' exit. Undoubtedly, in the conditions of high risk of venture investment projects, closing down of the venture enterprise often coincide with its actual liquidation in case when there are no enough means for recovery of losses incurred by the venture investors.

On the whole the entire period of small venture development in the advanced countries makes about five years, sometimes – two or three years. As the venture capital means are put without any material guarantees from its recipient, investors agree with the risk to lose the invested means in case of failure. According to the expert data, about 20% of venture enterprises fail because of inability to take account of all market requirements, and 60% - only return invested means. However in case of achievement of success the rate of return on the advanced capital may considerably exceed the bank interests.

So, a successful venture financing depends on fulfilment of such requirements by investors:

- making of the comprehensive forecast of innovation economic potential for long-term prospects;
- precise definition of volumes of demand of potential consumers for the novelty, its economic advantages over existing methods to meet the requirement;
- revealing of resource limitations which can arise during creation, production and marketing of the novelty.

For a successful development of a venture enterprise it is necessary that its heads and staff meet special requirements. Quality of management of a firm, absence of strict formalization of management structures are important that creates preconditions of development of atmosphere of creativity in the collective, ensures speed, flexibility in decision-making. The minimum quantity of levels of control of "independent" venture enterprise provides personal involvement of the heads to the work of all company subdivisions.

In the venture management the main place is taken by questions of techniques of attraction of venture investments in the innovative enterprise. Considering an insufficient level of examination of the questions of venture investment, there emerges the need to scrutinize the sequence of stages of planning of processes of attraction of venture investments for realization of innovation projects by the enterprises.

Planning of financial provision and realization of the venture project is the kind of management activity, which provides that by following the certain sequence of stages to define the future results (goals and tasks) of the project to develop and introduce innovative products (goods, works, services), certain strategy of selection and attraction of financial resources, approaches to formation of capital structure of the venture enterprise, strategy to carry out the project. The goal of this planning is market value capitalization of the enterprise for investors can exit the invested enterprise under certain circumstances in the future [69; 70]. Let us give the sequence of stages of planning of financial provision and realization of the venture project [21; 35].

First. Definition of requirement for financial resources by the stages of the venture project:

- discovery of requirement for financial resources by the stages of the venture project;
- defining the risks, characteristic to every stage of the venture project;
- elaboration of terms of fulfilment of separate tasks, works at each stage, time for completion of individual stages and realization of the final stage of the venture project.

Second. Determination of the sources of financial resources:

- definition of the sources of attraction of necessary financial resources;
- search, estimation and choice of the venture investors;
- distribution of presentations and business proposals to the potential investors.

Third. Finding of kinds, forms and methods of attraction of the venture capital:

- estimation and selection of the kinds of venture financing of the project;
- formation of venture enterprise capital structure;
- conclusion of an agreement with the use of venture financing.

Fourth. Project realization planning:

- forecasting of raising of increment in venture enterprise cost (future volumes of production and sale of innovative products at the target prices, definition of a predicted unit cost);
- definition of importance of *i*-innovative property for the consumer, in comparison with other characteristics (property weight), expenses to get *i*-property (in the unit cost) and marginal utility of *i*-consumer innovative property of the product obtained as a result of the venture activity;

- definition of the net profit from sale of innovative products;
- prediction of cash flows of the venture project.

Fifth. Planning of market capitalization of the enterprise cost:

- forecasting of future cost of the venture organization;

- search, evaluation and selection of strategy of investors' venture enterprise exit.

Sixth. Planning of investors' exit:

- forecasting and exit of investors and estimation of cost-effectiveness of venture financing of the project for the involved venture entrepreneurship subjects.

Seventh. Completion [90, pp. 191-199].

They consider the stages of realization and financing of the venture project then when an entrepreneur decided to attract venture investments under conditions of insufficient experience and financial assets for its embodiment. Therefore we do not consider more accurately the stages of preliminary marketing research, working out of the preliminary feasibility study, making decisions on project realization by the entrepreneur himself till the moment of venture financing proper of the project.

The following themes of the manual cover detailed study of separate stages of financial provision and realization of venture projects of the enterprises.

Test questions

1. Explain the meaning of "independent" ventures concept. Why is this concept written in quotes?
2. Name and describe the main stages of "independent" venture creation.
3. What is called "exit"?
4. What forms of exit do you know?
5. Reveal the essence of techniques of attraction of venture investments in the innovative enterprise.
6. What provides for the process of planning of financial provision and realization of the venture project?
7. Tell about the result of planning of market capitalization of venture enterprise cost.
8. Why is investors' exit planned? Is it obligatory for the venture investment process to have an exit plan?
9. Describe the average period of development of a small venture enterprise in the developed countries of the world.
10. What are the special demands which are placed on venture investors and venture capital recipients in the course of the venture financing?

11. SEARCH, SELECTION AND ATTRACTION OF VENTURE INVESTORS BY MANAGERS OF INNOVATIVE ENTERPRISES

11.1. Importance and topicality of a thorough search and selection of venture investors by managers of innovative enterprises

Definition of the sources of attraction of necessary financial resources, special features of searches, estimation and selection of venture investors – difficult process. Considering that, that venture investors offer many services to firms on a contractless basis, it is necessary to take account of criteria according to which capitalists are distinguished. It is the list of services, which are (or are not) rendered by venture investors that promotes formation of belief about their influence on the managerial process of ventures.

The analysis of activity of the European venture enterprises for 1998-2010 has shown dependences between that how the process of venture investment occurs and its results. The enterprises which venture capitalists took an active part in creation of the management team structure of the venture enterprise, formation of the board of directors, helped with attraction of means from new sources of the venture capital and with whom one established a constant and open communication process, achieved a success. The managers' experience and knowledge of accounting, finance and law, as well as degree in economics or engineering majors also influences the results of ventures activity. Age (period of operation in the market) and venture capital firm size exert a small influence on venture activity efficiency, and type of organizational structure of management of the venture – rather essential.

There are essential dependences between a kind of activity and services of venture capital funds and ventures development. Among young venture capital funds there are few successful exits. The effectiveness and survival rate of venture capital funds depends on their size, a rating of success rating of "exits". Large-size venture capital funds, having operational experience in the market of venture investments are less inclined to bankruptcy and leaving the business. Education and business experience of venture capitalists and investment managers considerably influence the survival rate of venture capital funds. As practice has shown, the majority of successful exits during favorable market opportunities were made by partners with sufficient business experience, instead of those with experience in the scientific scope of activity [157]. The weighty factor of efficiency of the venture is the venture capitalist's local business

experience in the country where the firm is situated. A positive connection is between the activity of investors and the success of ventures. The results of research allow drawing a conclusion on higher level of success of "independent" ventures in comparison with other kinds of ventures.

Considering the researches on this problem [72; 93; 94; 139], we consider it necessary to study more precisely peculiarities of search, estimation and selection of potential investors of the innovative enterprises at the stages of venture financing.

Depending on a stage of life cycle of enterprise development, a stage of innovation process (venture project stage) where there is an innovative solution, one changes requirements of the enterprise for financial resources. That predetermines the urgency of application of diversified approach to processes of attraction of possible venture investors which differ among themselves not only by volumes of offered financial resources, but also by other accompanying services, desire to invest in certain stages of innovative solutions, propensity to the risks inherent in individual stages of the venture project.

For searches of the venture capital sources it is necessary for innovators and entrepreneurs to know the types and kinds of the main venture investors. At "seed" stage of financing the innovative enterprises can get financial resources from "incubators".

11.2. Cooperation, financial support, search and choosing of "incubators"

Incubators include the organizations which accelerate development process of young innovative enterprises, provide access to their financial, tangible and intangible assets by rendering various office, information, consulting, technical services [5; 12, p. 96; 58, p. 386].

One should choose and evaluate potential partners knowing the typology of kinds of "incubators". Evolution of forms of development of business incubators in the world predetermines spreading of various kinds of such organizations by one or another classification signs [5; 59; 66] (see Topic 3). For planning of innovative venture activity managers of the enterprise can take advantage of the developed by the authors' recommendations about the estimation and selection of "incubators".

Founders of the enterprise, undoubtedly, prefer criteria, priority when choosing "incubator". They are ranked by their importance and are given the corresponding weighting factor. Each potential object estimates its integrated indicator of "incubator"

appeal for the venture entrepreneur. The advisable criteria and weighting factors for "incubator" (I) estimation are given in table 11.1.

Table 11.1.

The proposed criteria of estimation and selection of "incubator" by the venture entrepreneur and their weighting factors

Criteria	Specific factors, q_i
1	2
Offering the whole range of services necessary for the entrepreneur "under one roof"	0.14
Constant business contacts, experience of cooperation of "incubator" (I) with the representatives of formal and informal sectors of the venture capital. Possibility to search and establish communications with potential investors	0.14
I gives recommendations to potential investors of the venture enterprise	0.13
Possibility for venture enterprise to get external services through outsourcing. Contracts of the I with such outside organizations	0.07
Experience of cooperation of the I with innovative enterprises. Managers' practical operational experience in the innovative sphere	0.11
Rendering of marketing services for evaluation of the market and innovation potential of the enterprise venture project	0.07
Entering of the I into cluster associations. Contracts of the I with the large industrial machine-building enterprises on the possibility to use their production and technological centers for ventures incubation	0.08
Possibility to get services of the I at later stages of venture enterprise development after it left the I	0.05
Possibility to invest the means of the I in the innovative enterprise	0.05
The I offers services at rates lower than market ones	0.04
Possibility to get flexible terms of payment for services by the venture entrepreneur (delay of payments, credits)	0.03
Access to the information on prospective investors from the formal and informal sectors of economy by way of membership of the I in international and regional organizations of Is	0.04
Time limitation of term of stay of the venture enterprise in the I or its absence (cooperation period is over when the enterprise passes to another stage of development)	0.02
Licences of the I to render certain kinds of services	0.01
The I conducts trainings, practical seminars for beginning entrepreneurs concerning business dealing, negotiations, presentations	0.02

The owner of the enterprise when answering a question can give different specific factors to criteria which are the most important for him/her at that moment. The venture entrepreneur values each of the aforementioned criteria in the following way: 1 – this

"incubator" sign is completely present or its level satisfies the entrepreneur; 0.5 – such "incubator" sign is partially present or its level partially satisfies the entrepreneur; 0 – sign, not characteristic of “incubator”, is absent.

Each potential "incubator" calculates an integrated indicator of appeal of "incubator" for the venture entrepreneur that is determined as the sum of weighed criteria of the estimation.

11.3. Attraction of individual investors – business angels

For the purpose of attraction of venture investors it is necessary for entrepreneurs to distinguish their kinds by various classification signs. As already mentioned, in the venture entrepreneurship area venture capital investors are conventionally divided into individual and institutional (see: Topic 2). The individual include angels who form the informal market of the venture capital. The institutional – pension funds, insurance companies, large corporations, venture capital and investment funds, investment banking firms, venture capital companies what create the formal market of the venture capital.

In spite of common characteristics of venture financing, in particular the status of direct investments ensuring the rights of co-owners of the invested STIC which shares are not listed on stock exchange, the main differences between angels and venture capitalists is investment by the former of the venture capital in various stages of development of enterprises and venture projects, different volumes of financing and rights of ownership to such resources. For example, venture capitalists dispose of means of venture investors, instead of their own, as angels do.

On the basis of the analysis of various sources [2; 65; 106; 117, etc.] and our own researches we come to conclusion that the majority of issues concerning the informal investors (angels) deal with problems of choice by the latter of objects of investment: estimation, analysis, criteria of definition of perspective projects and process of decision-making on investment. However little attention is paid to the study of the important factors by which venture enterprises should be guided, their founders when making decision on selection of the strategic partner to himself – the individual investor. That is why research of selection criteria of informal investors by the investment object (venture capital recipient) is topical, rather than vice versa.

In spite of some advantages, financing with the help of individual investors (angels) has its disadvantages (for more details, see: Topic 2). In order to avoid

misunderstanding and to prevent legal disputes in its future activity, the venture enterprise needs examine the investor in detail and approach thoroughly to disclosing of the information on rights and obligations of partners in the cooperation agreement.

For the purpose of an optimum choice of the potential investor it is expedient for venture enterprise founders to apply the technique of estimation of the appeal of individual investors and of selection of the best by means of an integrated indicator of investment compatibility which is proposed on the basis of results of the research conducted by means of questioning of entrepreneurs and managers of the machine-building enterprises. The estimation technique consists in following of certain sequence of steps which the enterprise can make use of at early stages of its development. So, the criteria of estimation and selection of potential investors of enterprises for venture financing have been proposed. Questioning of the heads of industrial enterprises allowed establishing priority ranks of the proposed criteria (table 11.2).

Table 11.2.

Ranks of the proposed criteria of estimation of the individual investor by the venture capital recipient and their specific factors

Criteria	Proposed ranks	Specific factors, q_i
Ratio of the size of investments and the individual investor's share of ownership in the enterprise	4	0.16
Individual investor's experience at the branch where the enterprise operates	1	0.18
Provision of guarantees, recommendations by the individual investor for the further financing	2.5	0.17
Individual investor's experience of investment in innovative risk projects	8	0.07
Individual investor's activity in enterprise control	9	0.05
Individual investor's goals match those of enterprise founders	7	0.08
Actual remuneration the enterprise can offer, satisfies the individual investor's motives	2.5	0.12
Good reputation, image, wide business ties of the individual investor	5	0.10
Successfulness of the invested projects which were financed by the individual investor	6	0.07

Note. Each level of satisfaction of criterion to the venture entrepreneur's requirements the values were given: 1 – this feature is completely inherent in the individual investor or its level satisfies the entrepreneur; 0.5 – this feature is partially characteristic of the individual investor or its level partially satisfies the entrepreneur; 0 – the feature, not inherent in the individual investor, is absent. The estimation of criteria 3-4, 8-9 assumes the answers: "yes" – 1 or "no" – 0. The other criteria are evaluated using the whole range of values.

The technique assumes that founders of the enterprise can choose themselves criteria, priority when selecting the informal investor of the venture capital (angel). Ratio of the size of investments and the individual investor's share in the enterprise defines his disposition to concession of the share to the informal investor in response to the project investment. This coefficient depends on the entrepreneur, his compliance, necessity to concede larger share for the sake of higher gain in the future. The estimation of the individual investor is made according to the values acceptable to the enterprise. The owner of the enterprise when answering a question can give different specific factors to criteria which are the most important for him/her at that moment. They are ranked by their importance and are given the corresponding specific coefficient.

For each potential investor the integrated indicator of investment compatibility of the individual investor (angel) and venture enterprise are calculated.

For all potential investors the integrated indicator of investment compatibility of the individual investor (angel) and venture enterprise are calculated. The integrated indicator of investment compatibility of the individual investor (angel) and venture enterprise is calculated using the formula:

$$V_{\sigma-a} = \sum_{i=1}^n a_i \times q_i,$$

where n – amount of criteria; a_i - i -criterion, which can possess the values 1; 0,5; 0; q_i – specific coefficient of i -criterion.

As world practice of venture investment confirms [7; 15-16; 23-24; 27; 51; 146; 148-149; 151], subjects of the venture infrastructure exert large influence for venture entrepreneurship development, by supporting venture enterprises at all stages of their development.

Venture enterprises can search for investors through associations of "angels", venture capital clubs, electronic systems of databases of "angels" networks (regional placement of organizations uniting "angels" across the world, is given in Topic 2).

Thus, venture enterprises at early stages of development can search for potential investors through associations of "angels", venture capital clubs, and electronic systems of databases of angels' networks. Unfortunately, in the CIS countries the similar organizations are not properly widespread. Creation and development of the venture infrastructure, national and regional networks and associations of private informal investors - "angels" can become its subjects, is topical for venture entrepreneurship stimulation.

11.4. Peculiarities of use of both venture capital funds and venture capital firms

From world practice it is known, that a special role in venture enterprises financing belongs to venture capital funds along with asset management companies. So, they finance stages of ventures which in comparison with the early stages of enterprise development demand the largest volumes of means: research sample, growth and expansion. Advantages of such financing to young innovative firms can include: attraction of means through incorporating, allowing considering the attracted capital on the one hand as borrowed, and on the other – as its own (this gives grounds to use his own means as effective as possible); consultations and support on running of a company; organization of prediscovery during the venture project realization; guarantees and recommendations to other potential investors of the following stages of financing; keeping business information confidential. As obstacles for financing of venture enterprises by means of venture ISIs become that that the majority of venture capital funds are specialized establishments that finance only particular industries which attractive to them. The decision-making procedure on investment is prolonged, a lot of time is spent for company management check and appointment of new managers, concession of the significant holding of shares; increase of control over draft on funds by the management of such enterprise [30-31].

Each venture entrepreneur should remember about the importance of a strategic step directed on attraction of a new partner of the activity. The success depends to a large extent on match of purposes and tasks of potential business partners: a venture entrepreneur on the one hand and a venture capitalist – on the other. An entrepreneur needs to know venture capitalist types that differ by goals and tasks of venture investment, operating procedures with the invested enterprises, etc. Some of the European researches offered the following classification of venture capitalists:

"merchants", "banker merchants", "magicians", "manufacturers", "matchmakers", "market gardeners" [44; 108]. All of them differ by investment purpose, professional structure, stages and volumes of investment and so on.

As statistical data confirm, there are very few professional venture capitalists in the world. It is related with special requirements which arise concerning venture managers, their educational and qualification level and so forth.

Though venture capitalists conduct a search for prospective investment projects, sit on a board of directors of the invested company, in every possible way promote its fast growth, but they use not their own means but those of investors. Therefore the final decision to invest funds is made by investment committee of venture capital fund investors.

The founder of the innovative enterprise should clearly realize the important conditions (criteria) which the venture capitalist should take into consideration for an effective cooperation and development of his enterprise. The majority of works on the economic literature is devoted to questions of the analysis and selection of investment projects by venture capital funds and their AMCs, but little attention is paid to how and what criteria venture entrepreneurs used during the search, analysis and choice of strategic partners in realization of venture activity. The importance of the issue of strategic partners search by the venture entrepreneur, namely – asset management companies, predetermines the need to work out technique of estimation and selection of such company (AMC with the funds of the venture capital generated and run by it, venture capital firm combining the functions of AMC and venture capital funds). The known venture entrepreneurs who have developed their ideas and have managed to achieve a significant development of own enterprises, assert, that search and selection of a strategic partner – like-minded investor – more valuable for a young venture enterprise development, than the fact of reception of such financing. As managerial effectiveness of the partner's management team, coexistence of partnering managers, their actions coherence, information and consulting support are not less significant, than getting of financial resources by the enterprise. Therefore venture entrepreneurs do not have to agree to venture capitalists' first proposals. Before concluding a strategic partnership agreement it is expedient to study the potential partner (partners) thoroughly. It is necessary for entrepreneurs to study the activity of AMC and experience of the enterprises invested and run by it, as they choose the partner for the next 3-7 years [73].

The venture entrepreneur from every asset management company of venture capital funds defines the integrated indicator of expediency of investment partnership between AMC (venture capital fund, venture capital firm) and potential object of its control

venture enterprise – V_{AMC} . V_{AMC} indicator is calculated by using the formula (see p. 186), similarly to the indicator dealing with the individual investor. A minimal value of V_{AMC} , at which it is impossible to answer unequivocally about expediency of attraction of an investor, is determined as 0.21. The companies which will get the largest coefficients, but the difference among which will vary within the range from 0 to 0.065, will get into the situation of ambiguous choice and need additional selection criteria.

The advisable criteria and specific coefficients for estimation of asset management companies (venture capital fund, venture capital companies) are given in table 11.3.

Table 11.3.

Ranks of the proposed criteria of estimation of asset management company by the venture capital recipients and their specific coefficients

Criteria	Proposed ranks	Specific factors, q_i
1	2	3
Licences to manage investment funds' assets, unit investment funds	5	0.08
At least two year experience of investment funds control. Senior staff – investment managers – with at least two year experience of innovative projects control	3	0.12
Successful experience of innovation projects realization in Kazakhstan and other countries. Senior staff of invest managers of AMC with such operational experience	6.5	0.08
Experience of funds management with the accumulated sums not less than US\$10 mln.	9	0.07
Regional AMC offices at the area where a venture enterprise is located	12	0.02
Confirmation of the facts that procedures of bankruptcy, financial improvement, sanctions on cancellation or suspension of licence to manage were applied to AMC	11	0.04
Confirmation of losses for last accounting periods, of debts of payment of means to state and local budgets, imposings of tax penalties for commitment of administrative offences in the sphere of circulation of securities and financial services, attachment, et al.	10	0.06
Provision of full amount of means necessary for a venture enterprise or only its part at the given stage of life cycle of the enterprise or at the stage of venture financing	2	0.13
Percent of venture enterprise voting shares transferred to the strategic partner	8	0.08

Investment manager who is one of the venture enterprise directors, has a successful experience of carrying out of investment scientific and technical projects at the early stage of their development, trust of banks and other financial institutions, business contacts and so on.	4	0.1
There is confidence and common language between a venture entrepreneur and AMC investment manager concerning understanding and vision of the purposes and strategy of enterprise development	1	0.14
Degree of involvement in the company control by venture entrepreneur after concession of a part of venture enterprise shares	6.5	0.08

Note. Calculations were made on the basis of the designated values by criterion: 1 – the sign is completely present or its level satisfies the entrepreneur; 0.5 – such sign is partially present or its level partially satisfies the entrepreneur; 0 – sign is absent. The estimation of criteria 6,7 assumes the answers: "yes" – 0 or "no" – 1, for criteria 1-5 and 9 one assumes answers "yes" – 1 or "no" – 0. For other criteria 8, 10-12 the complete estimation scale of answers is used: "yes" - 1, "partially" – 0.5, "no" - 0.

The algorithm of estimation and selection of potential investors by the venture entrepreneur has been developed by O.E. Kuzmin and I.V. Lytvyn and given on fig. 11.1. The account of theoretical and methodical positions regarding estimation and selection by venture entrepreneurs of potential investors ("angels", venture capital funds and AMC) together with the proposed integrated indicators: investment compatibility of "angel" and venture enterprise (V_a) and expediency of investment partnership between AMC (venture capital fund, venture capital firm) and a venture enterprise (V_{AMC}) at early stages of development will allow improving process of control, creation and functioning, including financing of venture enterprises in the post-Soviet countries.

Taking into consideration that that individual investors and asset management companies finance various stages of innovation projects and offer various volumes of investments, first of all it is necessary to attract just individual investors, and at stages of rollout of the innovative product in the market, demanding significant means, - asset management companies.

Under conditions of the weakening of investment activity of domestic investors, low activity of local domestic investors in participation in venture financing research of questions of search and selection of sources of venture direct foreign investments (VDFI) becomes topical. For example, for searches of VDFI it is recommended to consider the trust concept in the international venture business according to which the

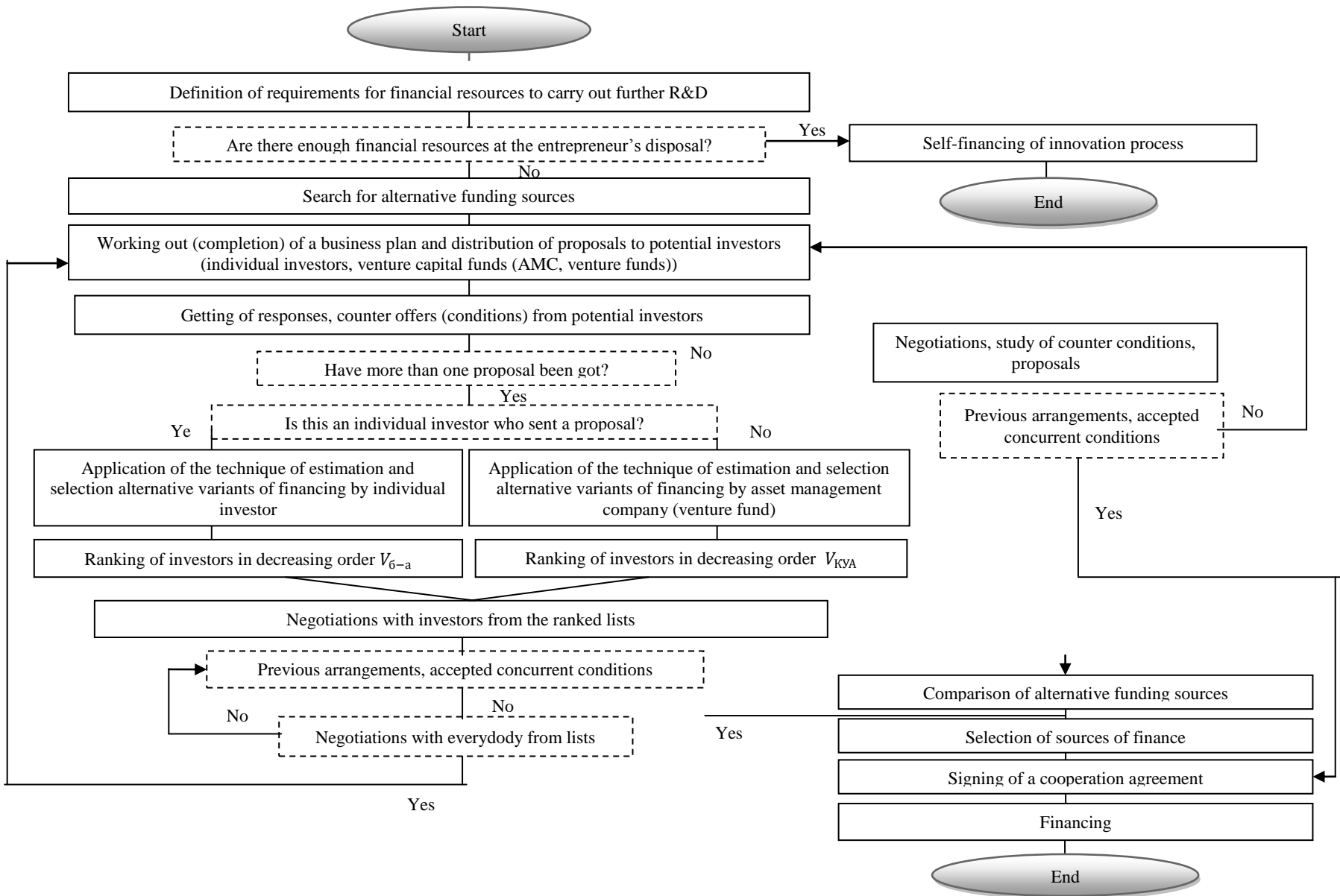


Fig. 11.1. Algorithm of evaluation and selection of potential investors by the venture entrepreneur

level of investors' trust to the recipient enterprise can be identified with that to the country where the enterprise is located [157]. Level of the general trust increases provided there is similarity in the country where investors reside and that of investments such factors, as economy state regulation, state institutes system, tax and legislative system, investment opportunities of the countries, geographical distances between the countries, availability of the information of mass media about the countries, etc.

Sociocultural factors are important: similarity of languages, traditions, beliefs (hopes) and so forth. Similarity of such factors increases possibility of realization of venture investments. Thus, while looking for foreign venture investors it is important to consider the following recommendations: economic and geographical remoteness of potential partners' countries should be minimal; address to the venture capital funds financing the companies of the given industry and the given stage of life development; sufficient level of trust of inhabitants of the investor's country to the investment country; language and sociocultural affinity overlap of the contracting countries.

When looking for neighboring countries with a sufficient level of development of the venture capital market the search for investors should be concentrated on concrete venture capital funds. Usually trust level to the enterprise grows at those venture capital firms where managers - citizens (natives) of the recipient country of the venture capital work, business partners or the company have already made venture investments there. The governmental programs and intergovernmental agreements about assistance of investment activity among the countries essentially influence increase of the general trust to the country and reveal possibilities to make venture investments [157].

Considering the important influence of the general trust on the personal one between business partners, it is extremely topical to increase the trust level to the recipient state of the venture capital. For this purpose domestic state and local government bodies by their decisions and actions should increase the state's image.

Thus, considering that, that venture investors offer many services to firms on a contractless basis, a thorough approach to searches and selection of venture investors by managers of innovative enterprises is weighty. A variety of types and kinds of venture investors and organizations of the venture innovation infrastructure participating in venture organizations control, have predetermined requirement for working out and use of techniques of estimation and selection of the potential venture investors offered by the teaching manual authors. Thus the techniques are proposed for this purpose: of estimation and selection of "incubators" as important objects of support of start-up innovative firms activity at preventure stages of their development; of individual investors selection - "angels"; of estimation and selection of venture capitalists and asset

management companies of venture ISIs. Considering, that the human factor essentially influences success of development of venture enterprises, selection criteria of venture investors ("angels" and asset management companies) from the side of venture enterprises – recipients of the venture capital are proposed.

The developed recommendations about the search and attraction of foreign venture investors will be valuable in the conditions of low activity of the domestic financial and industrial sector in support of domestic innovation projects.

Test questions and tasks

1. Ground the urgency of selection of venture investors by managers of innovative enterprises.

2. What factors of the activity of venture investors and organizations of the venture innovation infrastructure closely correlate with the facts of successfulness of venture enterprises?

3. Reveal the content of the technique of estimation and selection of "incubators" by young innovative enterprises.

4. What selection criteria of "incubators" do you think are priority?

5. Describe the content of the technique of estimation and selection of "angels" by start-up innovative enterprises.

6. Name the selection criteria of "angels" which you think are priority.

7. Analyze the content of the technique of estimation and selection of venture capitalists and asset management companies of venture ISIs by innovative enterprises.

8. What do you know about the selection criteria of venture capitalists and asset management companies of venture ISIs?

9. Define an integrated indicator of investment compatibility of an individual investor and a venture enterprise.

10. For what purpose is the integrated indicator of expediency of investment partnership between AMC and a venture enterprise calculated?

12. PECULIARITIES OF DEVELOPMENT OF A PRESENTATION AND BUSINESS PLAN OF A PROJECT FOR VENTURE INVESTORS

12.1. Development of the presentation of a project for venture investors

The innovation project presentation and the business plan for investors – top-priority documents for procedure of search for investors and attraction of investments. The main purpose of these documents – to interest investors in the project and the company that receives their investments, to convince, that it is this investment opportunity that is the most attractive. The aim of drawing up of these documents is to present and sell the idea to a venture capitalist in an efficient way. The presentation and the business plan should base on some advertising material as well (not in a pamphlet format), focused on sales, with weighed reasons, facts and a vaguely formulated business idea and messages which will compete to get the venture capital with thousand of other ideas.

A venture capitalist can take interest in: a competent team of managers who could realize new solutions in an innovative sphere; probability to get a significant profit; unique offer of products; possibilities for an enterprise to become public. All these basic ideas should be reflected in a presentation.

Thus, the presentation of a project for venture investors is the main document, called to generate venture investor's interest and to convince him/her to establish contacts with managers of a potential enterprise that receives venture capital.

The presentation should be in the form of advertising material with a precise targeted message to venture investors, contain an accessible, reasonable and accurately formulated statement of a business idea.

A typical presentation contains the following sections [122]:

1. Company. Full company name and address. When an innovative intermediary is used it is expedient to name a company conventionally, but accurately – address of the intermediary.

2. Contact person. They give the contact person's data (phones, address), responsible for attraction of means to finance this project.

3. Type of business. Industry and development stage of the business (enterprise). This information is necessary in order to get (even a negative) answer from a venture capitalist if the latter does not invest in certain branches of industry or stages of life cycle of an innovative enterprise. Such negative answer is better than its delay.

4. Company summary. This is a history of company development till the day of presentation preparation, emphasis of company's strength. Usually such information takes no more than one page.

5. Management. Description of key managers' experience in this sphere of business. Managers' concrete results (background) are described.

6. Product/service. Competition. A brief description of a product or service. It is specified, what is so unique about the offered products. Competition in the market is described in a nutshell, but with an accurate definition of a market niche for the product or service. As concise and brief information as possible is given on about half a page.

7. Funds requested. Determination of quantity of required financial resources as the chief items of expense. They ascertain forms of financing (convertible debt together with options, share capital), variants of sources or their combination with substantiation of the source which is preferred.

8. Collateral. This section is presented if debt finance is attracted with definition of restrictions on collaterals or lack thereof. As a rule, the larger current collateral the more significant amount of resources by debt finance it is possible to attract in exchange for a smaller share of the share capital.

9. Use of investments. They describe the chief items of expense and ways to use the attracted investments without detailed elaboration, but with indication of the basic spheres of the estimated expenses (construction, equipment purchase, marketing, advertising).

10. Financial indicators. Data of profit (and loss) reports, statement of balance (gross revenues, net profit, assets and liabilities, net worth of the enterprise). When creating a new enterprise such indicators are absent, therefore the section is skipped.

11. Finance plan. One gives a forecast plan of financial indicators of the enterprise for the next five years. They establish estimated values of gross revenues, EBITDA/IBITDA, net profit, assets and liabilities, net worth of the enterprise.

12. Exit. Investors mostly exit the invested enterprise in 3-4 years from the moment when the first investments have been made. The quantity of exit variants are limited and provide for IPO (Initial Public Offering), "Strategic sale", MBO (Management Buyout). These strategy demand a detailed study and description to the investor and assumes presentation of the facts of that, whether the company value and its size is sufficient for IPO and maintenance of liquidity of shares; why and how much strategic investors will be ready to pay for the company to provide an average profitability of investors of the first round of financing; whether managers will be able

to attract debt finance for MBO. If ways of exit are incomprehensible an entrepreneur will not get investments [13].

13. Distribution of presentation. The presentation should interest the venture capitalist perform the same role as advertising, be accompanied by detailed proposals, be simple to understand and open significant growth opportunities of such enterprise. It is necessary to send it in a package with a business proposal. Necessity for a non-disclosure agreement (NDA) arises then when the presentation has been accepted by a venture capitalist and a negotiating process about details of cooperation and future investment starts. Usually the venture capitalist's agreement to consider the presentation means that s/he takes responsibility for disclosure of the information got from the entrepreneur.

12.2. Drawing up business proposal and business plan of a project for venture investors

Each consideration of an offered deal begins with submittal of a business proposal and a business plan. In the beginning of venture entrepreneurship development business plans were not given such importance, as now. Writing of a business plans for venture investors considered as a kind of art. The business plan is a future business project. The primary goal of the business plan is to help to run one's business in more efficient way. Simultaneously it can be used to persuade potential investors in that that an entrepreneur will finance a viable proposal.

There are some software products, allowing doing calculations for investment projects. However, business plans drawn up by professional advisers or developed with the aid of software products, mainly turn out to be ignored by venture capitalists. In business plans it is important for a venture capitalist the possibility to study by using a submitted document an entrepreneur proper, his team by means of a business plan written by them without assistance. The business plan is not only formal description of an enterprise and a project, and its essence expressed in writing. Formation of business plans is frequently considered the component of corporate culture of a company. Depending on atmosphere in a company, relations among employees, distribution of authority, there arise goals and tasks before an entrepreneur and his team, business plans assume various forms.

The majority of investors prefer the business plans drawn up by entrepreneurs of companies without involvement of outside advisers. Such document will help to reveal

strength and weaknesses of a firm and its employees in the most accurate way. There is no universal form of a business plan. The concrete business plan is drawn up individually for each project, with account of requirements for a detailed elaboration of some sections – especially for investors. Always the venture capitalist's almost the single requirement was and still is a fair and frank representation of that what occurs in the company and around it. Venture capitalists pay a special attention to the section where entrepreneur's vision of company future is presented. The business plan reveals how an entrepreneur understands his present and future role in the market. By means of such exposition of prospects a venture capitalist can define the entrepreneur – as a person as focused on the market as possible, "paper workaholic" or person who is able to see integrally a situation around his enterprise.

In spite of this document significance, a venture capitalist first of all evaluates the personality of an entrepreneur proper and the quality of his team by studying a business plan written by them. It is possible to call venture capitalists professional readers of business plans. An entrepreneur, having decided to address to a venture investor, does it once or several times during his life. A venture investor, particularly in the West, may consider dozens of business plans every week. Therefore it is very important, that entrepreneurs draw up business plans by themselves without attraction of outside advisers. The venture capital as a source of alternative financing makes special demands to an object of investment. Needs and the style of work of different venture funds can differ considerably. Therefore before starting a business plan drawing up, an entrepreneur should understand what exactly an investor expects from him and only after that to begin writing it.

A business proposal (or request for investments) reminds a business plan, often completely corresponds to it, but is usually shorter, as contains fewer details. A business proposal of a project to an investor and a business plan – necessary conditions for a meeting of an entrepreneur with a venture capitalist, they should enable a potential investor to form a correct idea about the entrepreneur's proposal and his thoughts and bring to the venture capitalist's offer to meet. Frequently business proposals are developed by investment intermediaries or advisers who prepare so-called package of documents. The optimum business proposal volume makes approximately 30 pages although a business plan can be more than 100 pages long.

Thus, we come to conclusion that the above-stated review has allowed to give definition of the basic concepts.

The business proposal to venture investors is a written document where in an abridged laconic and accessible form key parameters of an offered investment project

are described. The primary goal of the business proposal – to describe laconically the uniqueness and project prospects, as well as to interest a venture investor.

The business plan of a venture project – a written document where one states the essence of an entrepreneurial idea, ways and means of its realization and market prospects of growth, production, organizational and financial aspects of a future business are described. In the given document requirements for investments, ways of investors' exit, risks of the project, and special features of formation of the team of managers which will exercise administrative control of the venture project are indicated too.

They distinguish several key elements, characteristic of all business plans. These elements are changed according to a plan main objective. Various sources of finance – banks, venture capital firms, investment funds – will define the degree of necessary detailed elaboration too. Therefore it is necessary to consider requirements to arrangement and disclosure of information in a business plan depending on a target audience of investors. The basic sections of an enterprise business plan are intended for a venture capitalist (admissible for a business proposal as well) [122]:

1. Summary. This element should give to the venture capitalist the first notion about the offer, the company and the project.

2. Business and its prospects. In this section the main attention should be paid to the uniqueness of business and major factors of success of the project. Here the following information is given: the general data, nature of business, company history, company future, uniqueness of business, data on the product or service, information about consumers and buyers of the offered product, stock of orders, analysis of branch or market, competition in the market, peculiarities of marketing of the offered production, manufacturing and production processes, production equipment, industrial buildings and works and enterprise personnel. It is to this section that the first and the main attention of the investor is paid.

Besides, it is necessary to provide the information on suppliers, a subcontracting agency with which the enterprise is planning to co-operate, patents and trade marks, further scientific and innovative activity. The documents should reveal possibilities of the settlement of judicial disputes, conflicts of interests, contain data about state regulation of the activity which the enterprise is planning to carry out or already performs, about insurance, taxation, corporate structure of the company and the list of publications about its activity.

Product or service – an accurate exhaustive description of the product. If there are several products it is expedient to describe each product in separate paragraphs. The

important special feature is the product price, mechanisms of its formation, factors influencing the price, tendencies in the market.

Consumers or buyers of the product or service: a detailed description of consumers of each product with comments on that why consumers will choose exactly these company products (price, quality, other factors); what consumer requirements will be satisfied with a concrete product of the enterprise; the list of the main consumers or buyers with indication of names, contact information and volumes of purchases in physical and monetary units, and also a share from total sale volumes. Sometimes it is necessary to give a complete list of future consumers of the production.

Branch and market, market analysis: volumes in physical and monetary units, a share of the enterprise and its dynamics. They describe changes in increment of the company value depending on changes in dynamics of sale volumes, market development anticipation; define a market segment where the company will operate. They predict segment development.

Competition: the competing products, volumes in physical and monetary units, dynamics, shares of the market of competition and their activity. The description of a financial condition of the main business competitors. The basic differences of the company products from analogues or their substitutes which are offered by competitors are accurately formulated. When there is no competition it is necessary to explain its reasons, to characterize competition prospects, having noted would-be competitors and terms of their market entry.

Marketing: distribution channels, organization of sales, basic intermediaries and distributors.

Production and production processes: the description of all stages of production process (including equipment, primary products and materials - purchased or of ones own production, a share of new production and/or assemblage) and the factors influencing it; production price and the factors affecting it. The value added of a finished product and company place in the overall value added of a product is characterized. They combine standard and unique production operations, critical terms of deliveries and labor of qualified employees.

Employees: their quantity (employees, workers and managers), classification by the basic stages of production process, sale and management, membership in trade unions. They name basic items of the general agreement, system of motivation of employees, salary level, its dynamics. The need in competent (rare in the labor market) employees, system of their hiring and retention is predicted.

Suppliers: basic suppliers of primary products and materials, components. They single out 3-5 suppliers with indication of that what they will deliver, their shares in the cost price in natural and monetary units.

Subcontracting agencies: the list of the basic subcontract agencies. They single out such 3-5 organizations, deliveries, and their share in the cost price in natural and monetary measurements.

The production equipment: the description of the capital equipment which will be used in production processes, use conditions (service, repair) and acquisition (purchase, leasing, credit). They mention a total cost of the equipment, level of its use, production capacity, and forecast of time necessary for equipment procurement.

Industrial premises and works: the description of capital facilities which an entrepreneur possesses or leases, sizes and cost per unit of the area of parcels of land, buildings and works, possession and lease terms are noted.

Patents and trade marks: a detailed description of patents and trade marks which the enterprise holds or plans to obtain or register. They define use conditions of another's patents and trade marks.

Research work: data concerning R&D expenses in the past, their results; plans for the future and expected results. When there are further R&D they describe in details the planned R&D, their stages, the budget, expected results and control objectives at the intermediate stages.

Legal procedures: the description of all processes in which the enterprise is involved. They name the prospects and prospective suits.

Legislation and state regulation: peculiarities of state regulation for the sphere, market and kind of enterprise. They mention possible benefits, subventions and so forth.

Conflict of interests: the description of all existing or potentially possible conflicts of interests. They establish the affiliation of owners and managers with competitors, suppliers and buyers of the enterprise.

Backlog: stock of orders and its prospects. They define its kinds, volumes and main buyers; for leading (significant) customers - their order.

Insurance: the description of all insurance policies which the enterprise holds or plans to take out. They name the kinds of insurance of risk processes of the company.

Taxes: enterprise tax policy. They establish special features of the taxation system of the enterprise and so on.

Corporate structure: the legal form according to which the enterprise exists and prospects of its change. They give the history of legal form changes of the enterprise.

The subsidiaries and affiliated companies, shareholders of subsidiaries and et al. are described.

3. Management. In this section they enumerate all directors and heads of the enterprise with indication of a position, an age. They describe key employees for the company, motivation system (premiums, bonuses, commissions, etc.). It is necessary to remember: team of managers – weighty factor of success of the enterprise for the venture capitalist, therefore in the document it is necessary to indicate enterprise managers' experience, age, inclination to risk, a successful operational experience and track record. It is necessary to ground, why these managers will manage the project as efficient as possible and will introduce new products into the market.

In the section all options to the shares issued till the moment of drawing up of the business proposal, quantity, price, information on exercise of options and strike prices, the plan of options to shares and plans concerning their changes, the basic indicators of an estimation of activity of the company according to which options are distributed, various forms of options, including the rights to growth of cost of shares are presented as well. They give the data about all shareholders, quantity of shares which they hold, purchase prices, distribution of shares in the company before and after the funding stage. They describe labor agreements with managers and employees of the enterprise, possible questions concerning the conflict of interests among interested parties of the enterprise. They name contact persons, advising companies, auditors, lawyers, banks and agreements concluded with them.

4. Requirement for financial resources. They describe: offered kinds and types of finance (debt, options, preferred and common stock) necessary for a stage of venture financing, financing proposals, capital structure; collateral for funding, guarantees, terms of financing by each type and kind of venture financing; accountability, use of investments, investors' share, cost of the company and distribution of the share capital, compensations for investors, their participation in company activity.

Debt finance: volume of resources, attraction terms, debt repayment pattern, percent, kind of interest rates (fixed, floating). They define a grace period prior to the beginning of principal redemption, its convertibility.

Options: purchase price and exercise of options, periods. They name conditions depending on what shares are got by the venture capitalist, their quantity and ratio.

Financing through the share capital: preferred stock (dividends, size, accruability of dividends; terms of redemption, term, the prices; convertibility in common stock, conditions, prices, terms; restrictive clauses, votes et al.). They describe common stock

(dividends, terms of redemption, rights to participation in the company control, restrictive conditions).

Capital structure: capital structure with division into common and preferred stock. They mention options and debt before and after financing.

Guarantees: data about the personal and corporate guaranties granted to the venture capitalist. They draw financial conclusions on each guarantee.

Conditions: all conditions on financing attraction, including the venture capitalist's participation in control, top management selection, his restrictive positions imposed on management of the company (issue of new shares, operations of division, merger, takeover and so on). The priority rights of the venture capitalist of which s/he can take advantage under condition of approach of certain events in the future are given.

Accountability: reports about the company activity that will be given to the venture capitalist. They describe transition to audit by the international standards from certain date in the future.

Use of investments: a detailed entrance of means by input factors: kinds of expenses and occurrence conditions.

Investor's share: distribution of shares and shares in the company among shareholders of the previous stages and a concrete stage of financing owing to attraction of new investments.

Company's value and capital distribution: the description of the price of the investor's share in comparison with the one paid by other investors. The basic stages of company development connected with achievement of certain indicators and stages of financing or attraction of new shareholders and company cost alterations from the previous stages to subsequent are given.

Compensations connected with investments: the description of all kinds and sizes of compensations paid to intermediaries (lawyers, advisers et. al) who were involved in the venture financing process.

Investors' participation in the company activity control: participation in company board of directors – of director or a supervisory person, taking part in all issues which are submitted to be considered by the board of directors. They describe direct participation of the venture capitalist's adviser or advisers, paid and involved by him.

5. Risks. In this section all kinds of risks inherent in the investment project are described:

- future demand limitedness;
- risks of limited resources;
- managers' insufficient experience;

- market uncertainty;
- production project uncertainty;
- possibilities of winding up of business;
- dependence on key managers;
- potential problems (what could go wrong);
- other.

6. Payback of investments and exit. They consider and evaluate three basic variants of investors' exit and of investments: IPO, sale to a strategic investor and buyout.

IPO (Initial Public Offering): the offer of shares in the public market – situation at which a part or all shares of the enterprise are sold in the market. The analysis of IPO prices is important as well as dynamics of shares prices and their liquidity, financial coefficients and so on.

Sale to a strategic investor: they evaluate the priorities of sales of all or the part of shares sufficient for controlling, to a strategic investor. They analyze basic potential strategic investors and the reasons because of which they can be interested in taking the control over the company at the prices which will ensure an expected remuneration to venture project participants. They define the possibility of sale of the company to a strategic investor using the example of M&A (merge and absorption) deals with other companies of the similar size of the same or related industry, prices of M&A deals, the size of obtained holding of stock, financial coefficients and so forth.

Buyback, buyout: possibility of the offer of options for redemption of stock by the venture capitalist in the certain moment in the future, and by managers of the company. They analyze both IRR and ROI on the basis of comparison of the public and nonpublic companies of a similar or a related industry depending on the basic indicators.

7. Analysis of the activity and forecasts. They describe the past and current operations of the company as well as forecasts of its development, form estimation of the company from the point of view of dynamics of earnings and expenses on the basis of the financial accountability for 3-5 years and forecasting data for 3-5 years. They analyze by incomes, expenses, operating charges, interest payment, taxes, net profit, current assets, expenses by elements of expenses (machinery and equipment, land, facilities and so on), by current liabilities, long-term liabilities, share capital, current liabilities, flows of cash assets etc. They consider coefficients during the past 3-5 years and their forecast for the same period of time.

8. Financial accounts. They make a selection of the documents for 3-5 years. The special attention is paid to evaluation of the consolidated accountability with additional explanations and breakdown.

9. Finance plan and forecast. In this section, like in the previous one, they make a selection of corresponding forecasts for 3-5 years united within the frameworks of common computer model by months and quarters. It is expedient to use ready software packages.

10. Additional materials and appendixes. This section usually contains annual reports, prospectuses and catalogues of the company. One can add to them illustrations and other visual information on the company products and services, the list of publications about the company, its products.

In total this is a complete list of issues that can be covered in a business proposal and a business plan of the businessman, but depending on a kind of the venture capitalist some sections can be shortened, others are expanded or omitted at all. However there are issues that will be the object of the venture capitalist's special attention and will require detailed coverage, - uniqueness of the business and deal, management system, forecasts of business growth, exit strategy.

It is expedient to reveal the uniqueness of the business and deal in several sections: "Business and its prospects", "Product and service", "Marketing and sales" (if unique approaches are used), "Management".

Forecasts – realistic achievable predictions of return of the invested cash assets, a comprehensive analysis of forecasts depending on scenarios of environment development.

Exit strategy – critical factors for decision-making on investment, in particular in emerging markets since successful exits through IPO and a strategic sale to the investor occur rarely. The definition of those investors who can potentially buy out the venture capitalist's shares; term and purchase price are important for the investor to make a final decision. The three basic strategies (IPO, sale off, buyout or buyback) are usually not sufficient for the venture capitalist. The entrepreneur should know a market segment or the whole market, and is obliged to have more complete information on the basic players of the market and their strategy, than the venture capitalist.

The business proposal (in a case when it has not found the investor within three months from the moment of working out) needs to be updated and improved depending on change of environment factors.

It is expedient to carry out distribution of business proposals with presentations into the selected circle - usually they are 5-7 venture capitalists. If the venture capitalist is interested in the proposal s/he will offer to meet and discuss the future cooperation issue in details. The venture capitalist's interest in the venture project will not mean investment of the whole sum of means necessary for the enterprise. The need in

syndication (joint financing) may arise. It allows reducing and spreading the risks, but demands definition of the leading investor who will organize the syndication. The venture entrepreneur can also organize himself the syndicated financing by involving investors, but he can address to the venture capitalist as well for the list of those investors with whom the latter would be ready to co-operate in the syndicated financing. The syndication services can be also rendered by investment banking firms, charging for the services. As a whole the syndication is a complex process as it demands significant expenses of time and financial resources that is why provides for costs to pay for the labor of lawyers, consultants for settlement of some issues among partners of the syndicate [13].

Thus, for attraction of venture investors the necessary documents, which should create venture investors' interest in the proposed business idea, are a business proposal and a business plan of the innovative project.

Test questions and tasks

1. What is the purpose of drawing up of a business proposal and a project business plan?
2. Explain the concept "business proposal of the project for venture investors".
3. Reveal the content of the basic sections of a typical business proposal intended for venture investors.
4. Define the concept "business plan of a venture project".
5. Analyze the content of the basic sections of a typical business plan of a venture project.
6. Why is not necessary to address for the help of experts when writing a project business plan intended for the venture capitalist?
7. What is the meaning of NDA? Who concludes such deals?
8. What key elements of a business plan of a venture project are obligatory for it to be competitive?
9. What do you understand as process "of syndication in the venture business"?
10. Name the financial indicators a business plan of a venture project should usually contain.

13. FORMATION OF VENTURE ENTERPRISE CAPITAL STRUCTURE

13.1. Approaches to formation of venture enterprise capital structure

Venture enterprise capital structure is formed during the process of venture capital attraction. The process of capital structure creation of the venture is influenced by the form of attraction of investments, invested capital volumes by founders and venture investors, by number of rounds of venture financing, shares of ownership transferred (sold) to venture capitalists etc.

Venture financing may occur at several rounds. Means for each round and round stages arrive by the just-in-time principle. With increase in quantity of rounds and consequently volumes of investments in a venture enterprise venture capitalists' share of the capital grows, the control over the enterprise increases. Each round of financing can and usually provides for entry of new investors. All these factors influence venture enterprise structure formation. The large number of rounds of venture financing promotes that that venture capital structure formation process becomes long-term and continuous. With increase in the borrowed venture capital the enterprise capital structure and founders' share are constantly changing. Therefore, considering these factors, venture managers (founders) of such enterprise are interested in a rational draft on funds of each round and avoiding of the necessity of next rounds of financing and dissolution of shares in the enterprise capital.

They single out three approaches to venture enterprise capital structure formation, hence - and various kinds and classes of securities which venture capitalists can get [94]. The first one assumes the use of only common stock for all categories of investors. The second one consists in the use by venture capitalists of preferred convertible shares, and for "angels" and the founders' common stock is provided. The third one, a new approach of venture financing predetermines the use by venture capitalists of common and preferred stock in a combination.

The first approach does not protect venture capitalists from losses. If managers of a venture enterprise work poorly they get remuneration in this approach. According to the second approach the use of the liquidation preference of preferred stock protects venture capitalists from losses and ensures the return of the minimum sum which can be larger than the one of the means put into a venture enterprise.

The liquidation preference is the right of the holder of a share to be among the first ones who will get the certain sum when an enterprise is closed down before holders of common stock are paid [94; 122].

The liquidation in the venture financing means measures (merger, reorganization, sale to the strategic investor, sales through IPO, smashup of the business et al.), consisting in the loss of voting authority by holders of the major part of shares.

The liquidation preference size is defined as follows: the size of venture capitalists' seed money is multiplied by factor which indicates n -multiplicity of the liquidation preference. Usually up to 98% of all contracts provide for payment to venture capitalists of the liquidation preference. Hence, the liquidation preference size allows returning n times more means, than have been put into the enterprise.

At venture financing according to the second approach the following kinds of preferred stock are used [94; 159]:

- without the right to take part in distribution of funds, which left after payment of n -fold liquidation preference (*nonparticipating preferred*);
- completely participating in distribution of the means, left after payment of the n -fold liquidation preference (fully-participating preferred); this kind protects venture capitalists' interests as much as possible, and the mechanism of payments according to it consists in that that at first the liquidation preference is paid, further payments occur according to the venture capitalist's share fraction on a par with holders of common stock, at that the conversion rate of preferred stock into common is kept, it is usually equal to 1:1;
- with the limited m -fold participation (participated preferred subject to a cap) – the most widespread kind of shares which are used in the venture financing, the mechanism of payments according to them is the following: venture capitalists get priority payment of n -fold liquidation preference, and then from the remained means - the sum ("cap") which can achieve the size, m -fold to the seed money into the enterprise (cap); the rest of funds after payments to venture capitalists are distributed among holders of common stock.

The preferred stock that fully participate in distribution of means, and the preferred stock with the limited m -fold participation are used in 83% of companies financed by venture capitalists.

Let us mention, that the popularity of the third approach to venture financing is growing. According to it common and nonconvertible preferred stock are sold in a combination at certain ratios: 90% / 10% or 80% / 20%. That is for 90% of the invested means the venture capitalist gets nonconvertible preferred stock, and for 10% of the invested means - X% of common stock. As a rule, this percent makes less than half of issued common stock. When they pay the means after venture enterprise dissolution the venture capitalist first of all gets the sum of invested means in the preferred stock (a sort

of liquidation preference), then funds, left after the holders of the preferred stock have been paid, can be distributed according to the ratio of shares of the holders of common stock: X% - to the venture capitalist – the holder of common stock, and (100 - X)% - to holders of common stock (to managers, founders of the enterprise).

The use of different approaches and kinds of securities at venture financing is represented in fig. 13.1 [94; 122].

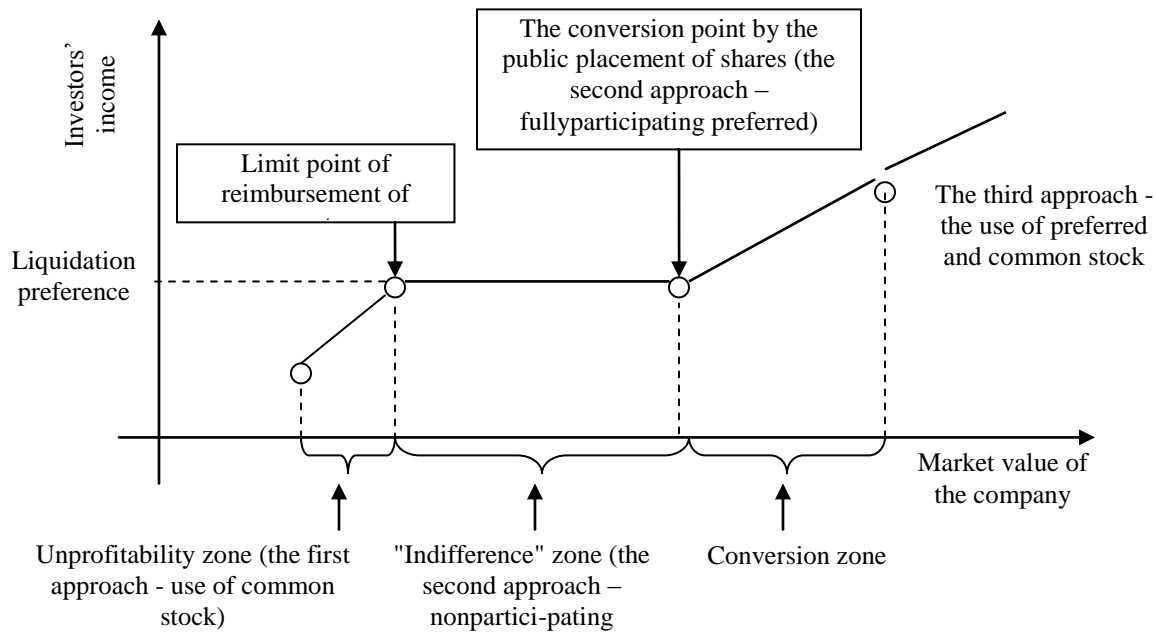


Fig.13.1. Graphic dependence of venture investors' earnings on change of the invested company value at different approaches to venture investment

The limit point shows a minimal remuneration size of investors who cover their expenses (sum of the put investments). "Indifference zone" indicates the lack of investors' interest in growth of the company value that is the common stock value as they get compensation of the liquidation preference. However when the company value has grown till such a value (conversion point) when at conversion of the preferred stock the venture investor gets larger remuneration than the liquidation preference, s/he may refuse from the liquidation preference of preferred stock, by having converted them in the common stock. As a rule, venture capitalists carry out conversion only of part of the preferred stock, reserving the right to use (get) the liquidation preference. Such right to convert or not a part of the preferred stock occurs in all cases, except IPO, as the latter action provides for conversion of the entire preferred stock into common and the right to

get (distribute) remuneration on a par with holders of the common stock. The unprofitability zone indicates possibilities of failure to return the put investments into the venture enterprise by investors because of the application of the first approach to financing – at the use of the common stock. For all investors (venture capitalists, founders, managers, angels) to be interested in company value growth which is identified exactly with growth of the common stock value, the majority of venture entrepreneurs adhere to the third approach as it considers interests of all parties interested in distribution of remuneration and eliminates drawbacks of the previous approaches to the venture financing.

13.2. Advantages and disadvantages of venture financing approaches to venture entrepreneur and venture capitalists

To use only common stock for all categories of investors. This approach usually has more advantages to the venture entrepreneur and managers of the enterprise, than to venture capitalists. At bad results of the venture project as investors as managers (founders) get remuneration as the result of its division by percentage ratio of shares of the common stock which are held by all persons concerned. Investors risk to lose the funds invested in the enterprise, having returned only a part of them. Such approach does not protect investors from possible losses and does not give them the right to priority reimbursement of the invested funds.

There is the use by venture capitalists of preferred convertible shares, and for "angels" and the founders - common stock. This approach to the venture financing is the most widespread. Venture capitalists are provided with liquidation preferences, the rights to the redemption of stock and a number of other actions against them forbidden to venture managers. Besides, when getting the liquidation preference, the majority of investors are not interested in company value growth in «indifference zone" as they receive the guaranteed compensation of the liquidation preference.

A new approach to the venture financing consisting in the use by venture capitalists of common and preferred stock in a combination. It considers interests of both venture capitalists and managers (founders) of the venture enterprise. The venture capitalists' possibility to get a part of compensation as increment of the common stock price stimulates them to apply the maximum efforts to increase the invested company value.

Generalization of researches [69-71; 94; 122; 139] has allowed revealing advantages and drawbacks of approaches to the venture financing for the venture entrepreneur and venture capitalists (table 13.1).

Table 13.1.

Advantages and disadvantages of the use of venture financing approaches to the venture capitalist and venture entrepreneur (founder, manager)

Approach	Advantages/drawbacks to the venture entrepreneur	Advantages/drawbacks to the venture capitalist
The use only of common stock for all categories of investors	<p>Advantages:</p> <ul style="list-style-type: none"> - receipt of remuneration according to share of the common stock; - simultaneous distribution of financial risks among proprietors of the enterprise depending on their share in the capital of such enterprise; - convenient and simple to use and calculate at the current and future value of the company and ownership ratios; - investors' maximal interest in growth of ordinary shares value of the enterprise 	<p>Drawbacks:</p> <ul style="list-style-type: none"> - significant risks of failure to return the sum of the investments put in the enterprise; - distribution of compensation and its receipt by all interested parties irrespective of their contribution to the end result of the venture project
The use by venture capitalists of preferred convertible shares, and of the common stock by other subjects.	<p>Drawbacks:</p> <ul style="list-style-type: none"> - lack of venture capitalists' interest in company value growth in "indifference zone"; - neither guaranteed income nor possible return of the invested means 	<p>Advantages:</p> <ul style="list-style-type: none"> - getting of the guaranteed income as the liquidation preference and possible participation in distribution of compensation after its receipt ("cap"); - protection against stocks decline
Venture capitalists use the combination of common and preferred stock	<p>Advantages: investors' maximal interest in growth of ordinary shares value of the enterprise</p>	<p>Advantages:</p> <ul style="list-style-type: none"> - investors' maximal interest in growth of common stock value of the enterprise - sum of invested means in received ordinary shares more is lower, accordingly their purchase price is lower, than at the previous approaches; - the common stock yields profits in a shorter period, than at the previous approaches; - getting of the guaranteed income according to the liquidation preference of the preferred stock

The account of advantages and drawbacks of the mentioned approaches will allow making decisions on formation of venture enterprise capital structure.

13.3. Alternative sources of venture enterprises financing

Besides the venture financing, the enterprise can obtain means for development of innovative activity by means of various forms of crediting - accounts receivable financing (factoring), crediting against commodities, bank lending against securities of natural and legal persons, bridge financing, venture leasing. These forms can be accessible as to start-up venture enterprises, as mature venture capital firms.

The study of peculiarities of bank lending against securities of natural and legal persons and bridge-financing of venture enterprises are worthy of attention. Both legal and physical persons can provide guarantees to banks in exchange for a share in the capital of the enterprise as options and warrants. Options and their variants *warrants* are made up in the form of contracts which give the nonbinding right to the buyer, to purchase or sell the certain quantity of shares at the agreed price before the certain event occurs.

The bridge financing consists in provision of means to the venture capital companies that have spent the funds of the previous round of venture financing and before following rounds of financing occur they need means to complete the certain kinds of works and tasks (the venture project stage). This kind is often called "interim financing" as it allows the venture capital firms to receive financial resources on the eve, before the first registration of their shares on the stock exchange (IPO). Such loans are of short-term nature, they are granted by investors of the previous rounds of financing (often – holders of the preferred stock), but can be also provided by venture funds specializing in provision of such bridge loans. Bridge loans are formalized in the form of bridge notes or convertible promissory notes. Convertible promissory notes give the right to their holders to convert them into the shares of a venture enterprise during following rounds of venture financing. Annual crediting rates for bridge notes can be of either fixed or "floating" nature.

The notes are medium- or short-term receipts issued with a rebate from their declared cost.

Convertible notes – IOUs which can be converted into the shares of venture capital companies or automatically, or according to their holders' choice on the certain stipulated conditions.

As a security of such notes all company assets and their certain kinds can serve. The advantage of use of such loans to the venture capital firm is the possibility to receive means as separate, required at a concrete stage of the venture project, tranches and if there is no such necessity it is possible to refuse the unused amount of means. Holders of convertible notes have the right to their conversion, and also to percent on notes into the shares at any moment the given quantity of shares of the company with a rebate from the established price of such shares. They can enjoy their right they can during the subsequent rounds of venture financing. To avoid the equity dilution inevitable during conversion process of notes into shares of the venture company, the decision is made to issue options for proprietors and employees of the company.

Venture leasing. From the end of '90s of the XXth century a new kind of venture financing – venture leasing originates. This kind of financing, characteristic for early stages of development of enterprises provides for a combination of traditional leasing with the venture capital. It satisfies infrastructural and technological needs of young innovative firms (PCs, office equipment are leased for 3-4 years). Advantages of such financing – lower interest rates; avoidance of additional rounds of venture financing by conclusion of an agreement about venture leasing. Free cash flows, off-balance-sheet placing of equipment received as leasing, promotes that that the enterprise market value does not decrease, financial ratios remain attractive. These factors are especially topical before IPO [184].

In case of an operating lease the basic venture capital can be spent on: R&D, production, sales, marketing (main goals of the enterprise). Venture leasing is among the optimal variants to receive the equipment without attraction of new rounds of financing which can be accompanied by the ban of investors of early rounds. The only lien under the contract becomes a leased asset.

The emergence of a new kind of financing has predetermined development of new venture structures – venture leasing companies. They evaluate potential clients, a cashflow, and reputation and growth prospects in details. The leasing deal can be accompanied by the agreement on issuing of warrants on possibility of the company stock repayment. By means of warrants the lessor's risks are covered, the value of warrants makes up approximately 5-10% of the cost of original leasing equipment. The agreement on issuing of warrants should not contradict the previous contracts of the early rounds of venture financing, since as exercise of warrants favors equity dilution [184].

Signing of the preliminary agreement on terms of investment in the certain series of convertible preferred stock provides for definition of venture capitalists' rights, as well

as restrictions on the future actions of venture managers (founders) of such enterprise (veto rights) without the venture capitalists' consent.

The actions restricted by the venture capitalists include the ban on:

- merger, takeover and conducting of other business operations (combinations) by the venture capital firm;
- introduction of changes in statutory and constituent documents of the company;
- payment of common stock dividends;
- drawing up and striking of leasing deals;
- sale and another placement of assets of the company, including those related to the objects of intellectual property;
- redemption of the common stock by the company from their holders and additional issue of the preferred stock [73; 94; 96].

Let us notice, that when there are several rounds of venture financing then so-called classes (categories, series) of the preferred stock emerge. Issued at the first rounds of venture financing shares form Series A Preferred Stock, at the second round - Series B Preferred Stock, then - C etc. (depending on quantity of such rounds). Series A Preferred Stock unlike others, have a higher liquidation preference, than others, as risks of the first stages of financing are usually higher, than at the subsequent stages of venture enterprise development. Thus, venture capitalists' rights which should be covered in the previous agreement, may include the rights to the liquidation preference of the preferred stock, rights to redemption of stock, requests for registration of stock for a company account at each round of venture financing et al. The agreement should deal with kinds of securities and their issued quantity, price per a share and conversion prices of the preferred stock into the common, rights to elect members of the board of directors of the venture company, rights to get reports, their terms and forms, assertion of determination of the rights of employees of the company, et al.

Thus, formation of venture enterprise capital structure –complex and long-term process. Complexity consists in that that for this process various forms and sources of attraction of venture investments can be used, mostly – all known forms and sources are combined. This process is considered long-term because of necessity to use several rounds of venture investment in case of insufficiency of means for fulfilment of following stages of innovation projects. Venture financing may occur at several rounds. Means for each round and round stages arrive by the just-in-time principle. If there are new rounds of venture financing the composition and structure of the venture capital of the enterprise changes. So the entry of new investors who on certain terms get their

shares in the property of the enterprise occurs, and the founders and managers under such conditions lose their ownership ratios, and the enterprise capital is diluted.

They distinguish three approaches to formation of venture enterprise capital structure, providing for the use of various kinds and classes of securities which venture capitalists can receive: the first one – only ordinary shares for all categories of investors; the second – venture capitalists use preferred convertible shares, and angels and the founders – common stock; the third provides for the use by venture capitalists of ordinary and preferred shares in a combination.

Preferred stock special feature in venture financing provides for the privilege to receive prior liquidation preferences by holders of such shares. The liquidation preference is the right of the holder of a share to be among the first ones who will get the certain sum when an enterprise is closed down before holders of common stock are paid.

There are as advantages as drawbacks of the existing approaches to capital structure formation of the ventures. At that some approaches are favourable to venture capitalists, others – to founders and managers of enterprises. A compromise attempt to smooth disadvantages of the first two approaches is application of the third, newest of the approaches. The last approach considers interests of both venture capitalists and managers (founders) of the venture enterprise. The venture capitalists' possibility to get a part of compensation as increment of the common stock price stimulates venture capitalists to apply the maximum efforts to increase the invested company value.

Test questions and tasks

1. Explain the process of venture enterprise capital structure formation.
2. Name the alternative sources, except the venture capital, being sources of financial resources of the ventures.
3. By what approaches to venture investment, known to you, is ventures capital structure formed?
4. Reveal the essence of the second approach to formation of venture enterprise capital structure.
5. Analyze the kinds of shares used at the third approach to formation of venture enterprise capital structure.
6. What is the liquidation preference? How is it calculated?
7. Describe the advantages and drawbacks of the first approach to formation of venture enterprise capital structure.

8. What approach protects venture capitalists' interests as much as possible?
9. Graphically illustrate and explain the contents of the concepts "indifference zone", "unprofitability zone" and "conversion zone".
10. Consider the contents of the new kind of venture financing – venture leasing.

14. PLANNING AND FORECASING OF FUTURE COST OF AN ENTERPRISE ATTRACTING VENTURE CAPITAL

14.1. Planning of processes of production and sale of venture projects products

To predict the future venture enterprise value, one needs data about the future volumes of production and sale of products of such enterprise, target prices of venture products etc. As the process of venture financing lasts for several years, and rollout in the market occurs in several years after injecting of upfront investments, it is necessary to define approximate sale volumes of new production, a price level and so on. This information demands forecasting and they gather it at the stage of planning of processes of production and sale of products of venture projects.

One of the stages of sequence of financial provision of venture projects consists in planning of accretion of increment of venture enterprise value. It is then when one predicts the future volumes of output and sale of innovative production at target prices, unit cost, the plans of reception of cash flows and net profit of the venture project from innovative production sale are created.

The business plan of the venture project should contain information on sales expectations of production by years (production program) and the financial plan of the enterprise development for the nearest years. They forecast the future sale volumes of innovative products to estimate possible losses from an innovative activity, incurred as a result of sale volumes decrease of an innovative product and its possible price reduction.

Sale volumes and selling price of an innovative production, corresponding to loss of the enterprise from income deficiency are calculated under three scenarios. Net operating profit from innovative production sale (sales proceeds EBITDA), the net income from innovative production (IP) sale are possible to calculate by using the formulas:

$$EBITDA_{in} = \sum_{i=1}^n \{[Q_1P + Q_2P_2]_i\}, \quad (14.1)$$

$$NCF_{in} = \sum_{i=1}^n \{EBITDA_i (1-T) - C_{\%}\}_i, \quad (14.2)$$

where Q_1 – sales volume of innovative product at the planned price P ; Q_2 – sales volume of innovative product at a reduced price P_2 ; P_2 – price of an innovative goods, lower than the planned; NCF_{in} – venture enterprise profit from innovative production sale, $EBITDA$ less taxes and payments of a long-term debt ($C_{\%}$) At that $Q = Q_1 + Q_2$, $P_2 \ll P$; T – profit tax, %.

The annual profit received from sale of an innovative product, is calculated according to the scenarios, considering different values of predicted sale volumes of an innovative product and selling prices. The calculation of enterprise possible losses because of income deficiency depending on scenarios is therefore:

$$NCF_{1i} = \sum_{i=1}^n \{ [Q_1 P + Q_2 P_2 - QV]_i (1 - T) + A \}, \quad (14.3)$$

$$NCF_{2i} = \sum_{i=1}^n \{ [Q(P - V) - F - A]_i (1 - T) + A \}, \quad (14.4)$$

where NCF_{1i} – annual income, received from sale of volume of innovative product Q_1 at the price P (planned) and sale of volume of innovative product Q_2 at the price P_2 , US\$; NCF_{2i} – annual income, received from sale of projected volume of innovative product Q at the price P , US\$; V – variable costs per product unit, US\$; F – fixed charges, US\$; Q_1 – sales volume of innovative product at planned price P ; Q_2 – sales volume of innovative product at the reduced price P_2 ; P_2 – innovative product price, lower than planned; A – depreciation charges, US\$, given $A_i = \text{const}$.

Having assumed, that the generated flow of payments looks like annuity, we will get the size of payment flow NCF for any period and the same. Possible losses of the enterprise because of income deficiency from sale of an innovative product and its sale at reduced prices are calculated by using the formula:

$$R_i = NCF_{2i} - NCF_{1i} = \sum_{i=1}^n \{ (Q_i - Q_{1i}) (P_1 - P_{2i}) (1 - T) \}, \quad (14.5)$$

given $F_i = \text{const}$, $i = \overline{1, n}$,

where R_i - possible losses of the enterprise because of income deficiency, US\$; n – number of venture project stages, project period, years.

Total consolidated net cost of cash payments for the project with the account of costs and risk premiums at each stage of the LC of an innovation can be defined by using the formula

$$NPV = - \sum_{i=1}^b \frac{C_i}{(1+r+R_I)^i} - \sum_{i=1}^c \frac{C_i}{(1+r+R_{II})^i} - \sum_{i=1}^d \frac{C_i}{(1+r+R_{III})^i} - \sum_{i=1}^f \frac{C_i}{(1+r+R_{IV})^i} - \sum_{i=1}^g \frac{C_i}{(1+r+R_V)^i} + \sum_{i=1}^l \frac{NCF_i}{(1+r+R_{VI})^i} + \sum_{i=1}^p \frac{NCF_i}{(1+r+R_{VII})^i} \quad (14.6)$$

where NCF_i – annual proceeds, received from sales of innovative product of i -period; r – discount rate; $R_I, R_{II}, R_{III}, R_{IV}, R_V, R_{VI}, R_{VII}$ – risk premiums (unaccounted expenses) of first – seventh stages of venture project; R_{VI}, R_{VII} contain possible losses from receiving less profit; P – projected

price of innovative product; b – period of LC stage of innovation "idea origin", years; c – period of LC stage of innovation "early stage", years; d – period of LC stage of innovation "test sample", years; f – period of LC stage of innovation "rollout", years; g – period of LC stage of innovation "growth", years, l – period of LC stage of innovation "expansion", years; p – period of LC stage of innovation "maturity", years.

The basic assumptions are: $Q = Q_1 + Q_2$, $P_2 \ll P$, $Q_{1i} \leq Q_i$, $P_{2i} \leq P_i$, $F_i = \text{const}$, $A_i = \text{const}$, $V_i = \text{const}$, $i = \overline{1, n}$.

The important restrictions (conditions) of the venture project include the achievement of optimum result of venture activity on development and production of a unique or an improved product, ensuring its appeal both from the technical point of view and functional conformity to consumer requirements and from the viewpoint of utility and price appeal of a new product to potential consumers. Its consequence is achievement of the provided sale volumes of an innovation in the market. The information on indicators of innovative production should be provided, comparing it with the best domestic and world samples [4, p. 123].

Innovative production, or innovative properties of a product (improving innovations), should be considered not only regarding technically functional perfection, but also as a ratio between marginal utility which the consumer gets from the use of an innovation (innovative properties of a product), and expenses which the consumer is ready to incur to receive such properties in an innovative product.

14.2. Forecasting future cost of an enterprise attracting venture capital

The purpose of any activity – achievement of certain goals which can be measured by quantitative indicators. Quantity and contents (specifics) of the goals of carrying out of the venture activity for various venture entrepreneurship subjects are different. In spite of this, the important economic goals of venture entrepreneurship include achievement of a rapid growth and increment of the venture enterprise value. They determine economic effects of venture entrepreneurship subjects with account taken of rates and absolute indicators of growth of venture enterprise value. Therefore at a stage of planning of collateral for funding and venture projects realization, certainly, forecasting of the future value of a venture enterprise through reception of the venture capital and rapid growth of the enterprise is expedient.

There are various evaluation procedures of the value of enterprises. They are:

- use of a decision tree;

- method of discounted cash flows;
- Monte Carlo method etc. [95].

According to scientists' views, venture organization value is the function of expectations of productivity of its operation in the future when the enterprise will generate positive cash flows, show stable indicators of solvency, liquidity and so forth.

The venture company value is defined as the sum of shareholder value of the company, value of debt instruments minus free cash assets.

The venture company value is defined with the help of: a comparative method or that of the venture capital.

The comparative method of forecasting of venture enterprise value consists in the use of coefficient – multiplier of proceeds from sale of innovative products or company earnings before interest, taxes, depreciation, and amortization ($EBITDA$) of the compared companies. For comparison, they choose the companies with similar kinds of activity and production volumes. Market value of shares and volumes of sales proceeds for the last 12 months of the compared public companies are openly published for wide use. This method is used for definition of the venture company value at later stages of its development – acquisition of incomes from production and sale of innovative products.

The venture enterprise value by the comparative method is established in the following sequence:

1. Picking companies, which can be compared to the venture capital company, which is subject to evaluation, due to kinds of their activity and production volumes. Multiplier coefficient of the compared companies (CC) is calculated by using the formula:

$$K_{VEV} = \frac{VEV_{CK}}{12 \times EBITDA_{CK}}, \quad (14.7)$$

where K_{VEV} – multiplier coefficient of a compared company value to its sales proceeds ($EBITDA_{CK}$) for the last 12 months; VEV_{CK} – market value of a compared company, US\$; $EBITDA_{CK}$ – finance indicator, reflecting company earnings before interest, taxes, depreciation, and amortization, US\$.

2. Forecasted venture capital firm value (VEV):

$$VEV = K_{VEV} \times \sum_{i=1}^{12} NI_i, \quad (14.8)$$

where NI_i – predicted net operating profit of venture capital company of i -month from sale of venture innovative production ($EBITDA$), US\$, i – number of the month, when net operating profit of venture capital company is got.

3. Shareholder value of the venture capital firm:

$$AEV = VEV - BZ + EC \quad (14.9)$$

where BZ – debt instruments of the venture company: banking credits, net accounts payable, bridge loans, US\$; EC – free cash assets of the venture company, US\$.

4. The value of the venture company share which is defined on the basis of finding the quotient obtained by dividing shareholder value of the company by total quantity of the issued shares (diluted basis).

The "diluted basis" of shares is a quantity of shares which in aggregate reflect the property rights to the company. The "diluted basis" of shares includes ordinary shares, preferred stock (during their conversion in ordinary shares), shares which can be potentially received at converting of all options, warrants and other convertible securities issued by a venture capital firm in the process of attraction of various forms of venture financing:

$$P_A = \frac{AEV}{RB_A}, \quad (14.10)$$

where P_A – predicted price of a share of venture capital firm, US\$; AEV – shareholder value of venture capital firm, US\$; RB_A – "diluted basis" of shares, potentially possible quantity of issued shares of venture capital firm.

The venture capital method to define the venture enterprise value is applied at early stages of its development. Current venture enterprise value is defined on the basis of calculation of a predicted future company value by application of indices of discounting. As discounting coefficients internal rate of return (IRR) is used. It depends on life-cycle stage of venture enterprise. At early stages of development of venture enterprises the uncertainty from performing of such activity, and consequently, risks of performing of venture activity are higher than at later stages. Therefore at early stages of life cycle of a venture enterprise the internal rate of return is higher as it includes significant risk premiums of early stages of venture activity.

The scholar A. Lukashov recommends the values of rates of return which are used at various stages of life cycle of a venture enterprise, for definition of its value [93] (table 14.1). By using the method of the venture capital it is possible to define not only value and price of shares of a venture enterprise at the final stage of venture financing and venture enterprise dissolution, but also post- and preinvestment venture enterprise

value at each of the subsequent stage and round of venture financing, as well as profit retention and the share of investors of early rounds of financing adjusted for equity dilution.

Table 14.1.

Recommendations for the use of evaluation procedures of venture enterprises value depending on their stages of development and those of venture financing at which they are

Life-cycle stage of venture enterprise	Stage of financing	Target internal rate of return (IRR),%	Application of evaluation procedures of venture enterprise value depending on the received result at each stage
Stage of development of an innovation idea	Early stage, seed stage	> 80	Venture capital method. There is evaluation of ideas
Stage of development of new product conception	Start-up stage	50-70	Venture capital method. Estimation of ideas and their concepts, business models
Stage of development of the design, prototype, pilot sample of the innovation product	Expansion stage – the first stage of venture financing	40-60	Venture capital method. Evaluation of the design, prototype, pilot sample of the innovation product
Stage of rollout of innovative products		30-50	Venture capital method. Estimation on the basis of forecasting of the future proceeds from sale of innovative production
Stage of production, growth of volumes of production of the innovative products and acquisition of net incomes	Later stages of financing	20-35	Methods of the venture and comparative capital. There is estimation on the basis of net income from sale of innovative production (EBITDA)

They evaluate the venture enterprise value by stages and rounds of venture financing by using the method of the venture capital, adhering to the following sequence:

1. Determination of current venture capital firm value (VEV^P , US\$) through discounting of the future predicted value established by the comparative method:

$$VEV^P = \frac{VEV}{(1+IRR)^n}, \quad (14.11)$$

where VEV – forecasted value of the venture capital firm defined by the comparative method, US\$; IRR – maximally accepted relative level of costs which can be made at a certain stage of the venture project, internal target rate of return of the venture project; n – quantity of the venture project stages.

2. When venture capitalists or other investors put a certain sum of means then such investors' share in current venture company value is defined (VEV^P):

$$D = \frac{Inv}{VEV^P}, \quad (14.12)$$

where D – venture investors' share in current venture capital firm value; Inv – sum of put venture investments which is subject to the exchange for share of venture capital firm value, US\$

3. Quantity of issued shares which the investor gets if s/he puts means into a venture enterprise (Q_{HA} , US\$)

$$Q_{HA} = \frac{D \times Q_{CA}}{1-D}, \quad (14.13)$$

where Q_{CA} – amount of issued shares before attraction of investments stage, pcs.

The purchase price of one share is defined by the investor by using the formula:

$$P_A = \frac{Inv}{Q_{HA}}, \quad (14.14)$$

where P_A – price of new issued stock, sold to the venture investor, US\$

4. Venture firm value after the completion of the first round of financing:

$$VEV^1 = \frac{Inv^1}{D}, \quad (14.15)$$

Price of one share after the completion of the first round of financing of venture enterprise (P_A^1):

$$P_A^1 = \frac{VEV^1}{Q_{CA} + Q_{HA}}, \quad (14.16)$$

where Q_{CA} – amount of old shares, issued before attraction of investments stage, pcs. Q_{HA} – quantity of issued shares which the investor gets if s/he puts means into a venture enterprise at the first round of financing, pcs.; VEV^1 – venture firm value after the completion of the first round of financing, US\$

The majority of venture enterprises does not meet their need in financial resources after one round of such financing and receive investments during several rounds. If the decision on expediency of next rounds of venture financing has been made then investors of the previous rounds with each stage may receive a smaller share in the capital of the invested company as there occurs equity dilution process of such enterprise.

5. For prevention of loss of stakes in ownership of the venture enterprise the share of investors of early rounds of financing is calculated adjusted for equity dilution that is by means of retention rate.

The retention rate shows value, by which it is necessary to divide the investor's target share in the capital at liquidation and the investor's exit to receive an equivalent ownership ratio of such enterprise at the first round of financing. Hence:

$$K_{y\partial}^3 = \frac{1}{(1+E_m^2)(1+E_m^3)}, \quad (14.17)$$

$$K_{y\partial}^2 = \frac{1}{(1+E_m^2)}, \quad (14.18)$$

where R_r^3 – retention rate of capital ownership ratio of investors of the first rounds in the process of the second and the third rounds of financing; R_r^2 – retention rate of capital ownership ratio of investors of the first rounds at the time of the second round of financing; E_m^2 – share of new issue of shares during the second round of financing, share of issue of shares in new (second) round; E_m^3 – share of new issue of shares during the third round of financing, share of issued shares at new (third) round.

The share of investors of the first round of financing adjusted for equity dilution of the second and third rounds of financing is calculated by using the formula

$$D^2 = \frac{D}{K_{y\partial}^2}, \quad (14.19)$$

where D^2 – ownership ratio with which investors should be provided at the first round of financing that at the end of the second round they have received a target share of ownership in the venture enterprise capital (D).

$$D^3 = \frac{D}{K_{y\partial}^3}, \quad (14.20)$$

where D^3 - ownership ratio with which investors should be provided at the first round of financing that at the end of the third round they have received a target share of ownership in the venture enterprise capital (D).

The quantity and the price of one share adjusted for equity dilution owing to several rounds of financing is defined by using the formulas:

$$Q_{HA}^2 + Q_{HA} = \frac{D^2 \times Q^1}{1-D^2}, \quad (14.21)$$

$$Q_{HA}^2 = \frac{D^2 \times Q^1}{1-D^2} - Q_{HA}, \quad (14.22)$$

$$Q_{HA}^3 + Q_{HA}^2 + Q_{HA} = \frac{D^3 \times Q^2}{1-D^3}, \quad (14.23)$$

$$Q_{HA}^3 = \frac{D^3 \times Q^2}{1-D^3} - Q_{HA}^2 - Q_{HA}, \quad (14.24)$$

where $Q_{HA}^2 + Q_{HA}$ – quantity of shares which the investor of the first round of financing should have to ensure himself the share of D^2 at the first round of financing, and at the end of the second round of financing it will be his target share (D); Q_{HA}^2 – additional quantity of shares which should be transferred to the investor of the first round at the second round of venture financing, that together with the shares transferred at the first round, the investor will ensure himself at the end of the second round of financing a target share (D); D^2 – reduced target share of the property (D) in the capital of a venture before the first round of financing of the investor during two rounds of financing; Q^1 – total of shares received as a result of issue at the first round of financing, contains both old and new shares issued at the first round of venture financing; $Q_{HA}^3 + Q_{HA}^2 + Q_{HA}$ – quantity of shares which the investor of the first round of financing should have to ensure himself the share of D^3 at the first round of financing, and at the end of the third round of financing it will be his target share (D); Q_{HA}^3 – additional quantity of shares which should be transferred to the investor of the first round at the third round of venture financing, that together with the shares transferred at the first and second rounds, the investor will ensure himself at the end of the third round of financing a target share (D); D^3 – The resulted target share of the property (D) in the capital of a venture to the first round of financing of the investor at three rounds of financing; Q^2 – total of shares received as a result of issue at the second round of financing, contains both old and new shares issued at the first and second rounds of venture financing.

Venture enterprise value is defined at different stages of its venture financing. At that it is possible to track, as the prices of issued shares change depending on quantity of rounds of venture financing (table 14.2).

Table 14.2.

Definition of increment value and share price of a venture enterprise depending on quantity of rounds of venture financing

Venture enterprise value	Price of one share	Quantity of shares
1	2	3
First round of financing		

$VEV^P = \frac{VEV}{(1+IRR)^n};$ $VEV^P = P_A^0 \times Q_{CA};$ D^0	P_A^0	Q_{CA}
First round of venture financing Issue of Series A shares		
$VEV^1 = \frac{Inv^1}{D_A};$ $VEV^1 = P_A^1(Q_{CA} + Q_{HA});$	$P_A^1 = \frac{Inv^1}{Q_{HA}};$ $P_A^1 = \frac{VEV^1}{Q_{CA}+Q_{HA}};$	$Q^1 = Q_{CA} + Q_{NA};$ $Q_{HA} = \frac{D \times Q_{CA}}{1 - D}$
Growth coefficients of the share price and company value during the first round of financing		
$K_{VEV}^1 = \frac{VEV^1}{VEV^P}$	$K_{PA}^1 = \frac{P_A^1}{P_A^0}$	
Second round of venture financing Issue of Series B shares		
$VEV^2 = \frac{Inv^2}{D_B};$	$P_B^2 = \frac{Inv^2}{Q_{HB}};$ $P_A^2 = \frac{Inv^1}{Q_{HA}+Q_{HA}^2};$	$Q^2 = Q_{CA} + Q_{HA} + Q_{HA}^2 + Q_{HB};$ $Q_{HA}^2 = \frac{D_A^2 - Q^1}{1 - D_A^2} - Q_{HA};$
$D_A^2 = \frac{D_A}{R_r^2};$ $R_r^2 = \frac{1}{(1 + E_m^2)}$	$P_{A+B}^2 = \frac{VEV^2}{Q^2}$	$Q_{HB} = \frac{D_B - Q^1}{1 - D_B}$
Growth coefficients of the share price and company value during the second round of financing		
$K_{VEV}^2 = \frac{VEV^2}{VEV^1};$	$K_{PA}^2 = \frac{P_{A+B}^2}{P_A^1};$	
Third round of venture financing Issue of Series C shares		

$VEV^3 = \frac{Inv^3}{D_C};$ $D_A^3 = \frac{D_A}{R_r^3};$ $D_B^3 = \frac{D_B}{R_r^3};$ $R_r^3 = \frac{1}{(1 + E_M^2)(1 + E_M^3)}$	$P_C^3 = \frac{Inv^3}{Q_{HC}};$ $P_B^3 = \frac{Inv^2}{Q_{HB} + Q_{HB}^2};$ $P_A^3 = \frac{Inv^1}{Q_{HA} + Q_{HA}^2 + Q_{HA}^3};$ $P_{A+B+C}^3 = \frac{VEV^3}{Q^3};$	$Q^3 = Q_{CA} + Q_{HA} + Q_{HA2} + Q_{HA3} + Q_{HB} + Q_{HB2} + Q_{HB3};$ $Q_{HA}^3 = \frac{D_A^3 \times Q^2}{1 - D_A^3} - Q_{HA} - Q_{HA}^2;$ $Q_{HB}^2 = \frac{D_B^3 \times Q^2}{1 - D_B^3} - Q_{HB};$ $Q_{HC} = \frac{D_C \times Q^2}{1 - D_C}$
Growth coefficients of the share price and company value during the third round of financing		
$K_{VEV}^3 = \frac{VEV^3}{VEV^2};$	$K_{PA}^3 = \frac{P_{A+B+C}^3}{P_{A+B}^2};$	
Basic growth coefficients of the share price and company value during three rounds of financing		
$K_{VEV}^{1-3} = \frac{VEV^3}{VEV^P}$	$K_{PA}^{1-3} = \frac{P_{A+B+C}^3}{P_A^0}$	

Legend for table 14.2: VEV – forecasted value of venture capital firm, defined by the comparative method, US\$; VEV^P – current value of venture capital firm, US\$; VEV^1 – value of venture capital firm after the end of the first round of financing, US\$; VEV^2 – value of venture capital firm after the end of the second round of financing, US\$; VEV^3 – value of venture capital firm after the end of the third round of financing, US\$; P_A^0 – price of one share before the beginning of the first round of financing of venture enterprise, US\$/share; P_A^1 – purchase price of one Series A share, issued at the first round of financing of venture enterprise, US\$/share; P_B^2 – purchase price of one Series B share, issued the second round of financing of venture enterprise, US\$/share. P_A^2 – actual purchase price of one Series A share by investor at the second round of financing of venture enterprise taking into account additional issue of Series A shares of Q_{HA}^2 , US\$/share; P_{A+B}^2 – price of one (A and B) share at the end of the second round of financing of venture enterprise, US\$/share; P_C^3 – purchase price of one Series C share, issued the third round of financing of venture enterprise, US\$/share; P_B^3 – actual purchase price of one Series A share by investor at the third round of financing of venture enterprise taking into account additional issue of Series B shares of Q_{HB}^2 ,

US\$/share; P_A^3 – actual purchase price of one Series A share by investor at the third round of financing of venture enterprise taking into account additional issue of Series A shares of Q_{HA}^3 , US\$/share; P_{A+B+C}^3 – price of one (A, B, C) share at the end of the third round of financing of venture enterprise, US\$/share; Q_{CA} – number of shares of venture enterprise, issued before the first round of venture financing, shares; Q_{HA} – number of new shares of venture enterprise (Series A), issued at the first round of venture financing, shares; Q^1 – total of issued shares by venture enterprise at the end of the first round of venture financing, containing old (issued before the first round of financing) and new (Series A) shares, issued at the first round of venture financing, shares; Q_{HB} – number of new shares of venture enterprise (Series B), issued at the second round of venture financing, shares; Q_{HA}^2 – additional quantity of shares which should be transferred to the investor of the first round at the second round of venture financing, that together with the shares transferred at the first round, the investor will ensure himself at the end of the second round of financing a target share (D_A); Q^2 – total of issued shares by venture enterprise at the end of the second round of venture financing; contains old (issued before the first round of financing) and new (Series A and B) shares, issued at the first and second rounds of venture financing, shares. Q_{HC} – number of new shares of venture enterprise (Series C), issued at the third round of venture financing, shares; Q_{HB}^3 – additional quantity of shares, which should be transferred to the investor of the second round at the third round of venture financing, that together with the shares transferred at the second round, the investor will ensure himself at the end of the second round of financing a target share (D_B); Q_{HA}^3 – additional quantity of shares, which should be transferred to the investor of the first round at the third round of venture financing, that together with the shares transferred at the first and second rounds, the investor will ensure himself at the end of the third round of financing a target share (D_A); Q^3 – total of issued shares by venture enterprise at the end of the third round of venture financing, contains old (issued before the first round of financing) and new (Series A, B, C) shares, issued at the first, second and third rounds of venture financing, shares; Inv^1 – amount of invested funds (investments) by investor of the first round of venture financing, subject to exchange for the share of venture capital firm D_A in the quantity of Series A shares – Q_{HA} , US\$; Inv^2 – amount of invested funds (investments) by investor of the second round of venture financing, subject to exchange for the share of venture capital firm D_B in the quantity of Series B shares – Q_{HB} , US\$; Inv^3 – amount of invested funds (investments) by investor of the third round of venture financing, subject to exchange for the share of venture capital firm D_C in the quantity of Series C shares – Q_{HC} , US\$; D^0 – share in property of venture enterprise, held by

founders of such enterprise before the first round of venture financing; D_A – share in property of venture enterprise, transferred to investor of the the first round of venture financing in exchange for a quantity of Series A shares – Q_H , to the amount of invested funds of Inv^1 ; D_A^2 – share in property with which investor of the first round should be secured at the first round of venture financing, in order that at the end of the second round he will get target stake in venture enterprise capital (D_A); D_A^3 – share in property with which investor of the first round should be secured at the first round of venture financing, in order that at the end of the third round he will get target stake in venture enterprise capital (D_A); D_B – share in property of venture enterprise, transferred to investor of the the second round of venture financing in exchange for a quantity of Series B shares - Q_{HB} to the amount of capital investment of Inv^2 ; D_B^3 - share in property with which investor of the second round should be secured at the second round of venture financing, in order that at the end of the third round he will get target stake in venture enterprise capital (D_B); D_C – share in property of venture enterprise, transferred to investor of the the third round of venture financing in exchange for a quantity of Series C shares – Q_{HC} to the amount of invested funds of Inv^3 ; R_r^2 – retention rate of capital ownership ratio of investor of the first round of venture financing during the second round of financing; R_r^3 – retention rate of capital ownership ratio of investors of the first and second rounds of venture financing during the third round of financing; E_M^2 – share of new issue of shares during the second round of financing, share of issued shares in a new (second) round, equivalent to value D_B ; E_M^3 – share of new issue of shares during the third round of financing, share of issued shares in a new (third) round, equivalent to value D_C ; K_{VEV}^1 – chain growth coefficient of venture company value at the first round of financing; K_{VEV}^2 – chain growth coefficient of venture company value at the second round of financing; K_{VEV}^3 – chain growth coefficient of venture company value at the third round of financing; K_{VEV}^{1-3} – base rate of growth of venture company value at three rounds of financing; K_{PA}^1 – chain growth coefficient of share price of venture company at the first round of financing; K_{PA}^2 – chain growth coefficient of share price of venture company at the second round of financing; K_{PA}^3 – chain growth coefficient of share price of venture company at the third round of financing; K_{PA}^{1-3} – base rate of growth of share price of venture company at three rounds of financing.

Under conditions of high market uncertainty and considerable risks of making of wrong strategic decisions which are inherent in the young innovative enterprises at the initial stages of realization of venture projects, to establish the value of such enterprises it is possible to use the method of real options. According to it market capitalization of the enterprise is defined by flows generated from the use of existing assets and current

value of investment possibilities of growth of a firm. Discrete investments of a firm that will create new investment opportunities, real options of company growth are calculated. Investment projects on creation of innovations, production expansion etc. increase cost of options of growth of companies. Hence, the increase in expenses for R&D, creation of scientific and technical joint ventures, strategic alliances at various stages of innovation processes, increase in investments in the human capital by participation of the personnel in trainings and seminars influences augmentation of real options of growth of the ventures, and consequently, enterprise market value as a whole.

That is why it is important in the course of planning of activity on creation of venture enterprise value to consider the factors influencing accretion of companies' value. Taking that into account, the companies have considerable growth potentials.

It is possible to define the venture enterprises value on the basis of real options of growth by using the formulas:

$$VEV = \sum_{i=1}^l \frac{NCF_i}{(1+WACC_i)^i} + \sum_{i=1}^p \frac{NCF_i}{(1+WACC_i)^i} + EVA_{growth}, \quad (14.25)$$

$$WACC_i = [(K_{3au} W_{3au} (1-T) + K_{cob} W_{cob})](1+R_i)(1+\pi_i), \quad (14.26)$$

where VEV – venture enterprise value US\$; NCF_i – annual profit, received from sale of innovative product of i -period; $WACC_i$ – minimal rate of return on invested venture capital, weighted average cost of capital i -period; l – period of stage of LC of innovation "expansion", years; p – period of stage of LC of innovation "maturity", years; EVA_{pocm} – cost of real option of growth of a venture enterprise; K_{3au}, K_{cob} – cost of loan and equity capital of a venture enterprise (their rate of return) W_{3au}, W_{cob} – share of the borrowed funds and equity capital (shares, depreciation charges and retained earnings) in the general structure of venture enterprise capital; T – profit tax rate; R_i – premium for risks of venture activity performing, %; π_i – inflation rate.

Let us consider the example of estimation of a market value of a venture enterprise by the method of real options of growth.

Let a symbolic company GROSSI, having innovative technologies on development of hybrid cars with lithium-ion cells, attracts the funds of "LIV Innovations" Venture Company for the purpose of adjustment and launching of mass production of such autos. According to the Japanese consulting company "Yano Research Institute", GROSSI Company has significant market potentials of growth as according to forecasts from 2009 till 2019 16-fold growth of the market of hybrid cars with lithium-ion cells will be observed. So an annual market growth will be 28%, and hybrid cars with lithium-ion cells will make 75% of all electric cars in the world [121].

After activities of the company have been scrutinized, competitiveness of the offered technology and similar concepts developed by other automobile companies has been estimated, the venture capital has been contributed to a statutory fund of GROSSI Company. On the basis of comprehensive study of forecasts of growth of the market of hybrid cars GROSSI Company has significant potential of growth of volumes of production and sales of such autos. In the conditions of world growth of cost of fuel materials electric cars will gradually displace ordinary cars. According to forecasts of analysts, GROSSI Company will be able to sell 2000 hybrids in 2016; annually sales volumes will grow by 55%. In 2017 sales volumes will make 3100 pcs. in 2018 - 4805, in 2019 - 7448 pcs. According to experts' estimates, retail prices for the hybrids will be: in the first year – US\$ 39 000, the second – US\$ 25 000, the third – US\$ 21 000, the fourth year – US\$ 18 000. Reduction of prices is connected with a severe competition because of entry in the market of hybrids of known manufacturers of automobiles which are already working on new concepts of such autos. Let us assume that the most probable value of the cost price on sales volumes – 58%, operating costs according to forecasts will make 14% of receipts, expenses for further R&D – 35% of sales volumes, depreciation – 9 % of receipts. For definition of the future market value of venture company GROSSI and the future incomes of venture investors at company's exit, for example, on IPO or when it is sold to strategic investors, we will use the known methods. In the conditions of uncertainty of strategic decisions connected with a choice of conceptual variants of development of electric cars, and market risks connected with commercialization of automobile innovations, for estimation of the future value of the company it is expedient to use the method of real options of growth.

Let us predict the future value of venture enterprise GROSSI by means of the methods of net cash flows and value forecast of real options of growth of the company after the basic period of the forecast. Experts have calculated the present cash flows of the company for this period: one provides for residual company value which is equal to the value of a real option of growth of the firm after 2019. By the estimates, the remaining part of the enterprise value will increase by 8% rate that is equal to growth rates of net cash flows. As the enterprise attracts investments in the form of the share capital then the weighted average cost of capital of the company will be equal to the equity value. The riskless rate is taken of 6.5%. The risk premium has been defined as the sum of country risk premiums and average general risk (5.25 + 10.04)%. The beta coefficient taken of 1.56 has been calculated for 28 enterprises of the automobile industry [174]: $WACC = 6.5 + 1.56 \times 15.29 = 30.35\%$. The value of the share capital is within the range of 30-50% what is recommended to consider as internal rate of return

for definition of venture enterprise value at the stage of its entry with innovative production in the market [93; 94]. Startup investments of enterprise's founders, made in 2015, were US\$ 2 mln. The basic assumptions and results of calculation of the value of GROSSI Company are shown in table 14.3.

The example of calculation of venture investors' future benefits and indicators of growth of the venture company GROSSI we will consider in Topic 17.

Let us summarize the analyzed material. So, one of the stages of sequence of financial provision of venture projects consists in planning of accretion of increment of venture enterprise value. At this period they forecast the future volumes of output and sale of innovative production at target prices, they define predicted unit cost, and they work out plans of reception of cash flows and net profit of the venture project from innovative production sale.

The future venture enterprise value, thanks to reception of the venture capital and fast growth of the enterprise, is predicted by means of such evaluation procedures of the value of enterprises, as the use of a decision tree, method of discounted cash flows, Monte Carlo method et al. The venture organization value is the function of expectations of productivity of its operation in the future when the enterprise will generate positive cash flows, will be described by stable indicators of solvency, liquidity etc. The venture company value is defined as the sum of shareholder value of the company, value of debt instruments minus free cash assets. The comparative method and method of the venture capital is applied to establish the venture enterprise value.

Table 14.3.

Calculation of the value of the venture enterprise GROSSI

Forecasted data, US\$.	Years				
	2015	2016 forecast	2017 forecast	2018 forecast	2019 forecast
Retail price for auto		39 000	25 000	21 000	18 000
Output rates, pcs.		2 000	3 100	4 805	7 448
Revenue		78 000 000	77 500 000	100 905 000	134 064 000
Cost price		45 240 000	44 950 000	58 524 900	77 757 120
Operating expenses		10 920 000	10 850 000	14 126 700	18 768 960
R&D expenses		27 300 000	27 125 000	35 316 750	46 922 400
Depreciation		7 020 000	6 975 000	9 081 450	12 065 760
Profit before taxes		32 760 000	32 550 000	42 380 100	56 306 880
Taxes		8 190 000	8 137 500	10 595 025	14 076 720
Startup investments	-20 00 000	-	-	-	-

Fixed capital investments		28 080 000	19 375 000	10 090 500	13 406 400
Net cash flows	-2 000 000	-3 510 000	5 037 500	21 694 575	28 823 760
Amount of net cash flows in 2015-2019.	50 045 835				
Present net cash flows	-2 000 000	2 692 700.71	2964 674.35	9 794 765.7	9 983 308.838
Value of a real option of growth 2019 +				139 267 643.7	
Present value of a real option of growth 2019 +				37 004 545.09	
Present market value of the company				55 054 593.27	

Thus, under conditions of high market uncertainty and considerable risks of making wrong strategic decisions to define the future value of young enterprises it is possible to use the method of real options.

Test questions and tasks

1. Explain the purposes of forecasting of volumes of production and sale of products of a venture enterprise.
2. Describe the methods of forecasting of the future value of the enterprises.
3. Name the methods, typical for estimation of the future value of venture enterprises.
4. What forecasts of volumes of production and sale of products are applied when using the methods of forecasting of the future value of venture enterprises?
5. Reveal the essence of the venture capital method.
6. What do you know about the methods of forecasting of the future value of venture enterprises, suitable to define the value of ventures at early and later stages of development?
7. Reveal the content of the method of real options of growth.
8. What is the retention rate calculated for? What is their economic essence?
9. Determine the discounting factors by the venture capital method.
10. By what method of forecasting of the future venture enterprise value is it typical to calculate the multiplier coefficient of proceeds from sale of innovative production?

15. INVESTORS' EXIT STRATEGIES

15.1. Kinds of strategies

Already at a stage of planning of the activity directed on attraction of the venture capital sources, it is necessary to search, evaluate and predict a possible choice of investors' exit strategy, that is to plan how investors will exit the invested enterprise and to develop strategy of return or retention of shares of ownership by founders and managers of a venture enterprise. Exit planning assumes the selection of the most acceptable strategies.

Basic investors' exit strategies – by way of:

- direct sale of their shares to strategic investors (trade sale);
- public placement of shares (IPO);
- redemption by an initial owner;
- management buy-out (MBO);
- sale of shares of ownership to other investors (individual or institutional) for capital replacement – management buy-in (MBI);
- dissolution of such enterprises, sale of assets and write-off of debts [6, pp.219-243].

Direct sale of shares of ownership to a strategic investor (trade sale) – this is so-called gross sale of shares is usually of the controlling interest of enterprises to non-dedicated institutional investors.

Direct sale of their shares to strategic investors who are non-dedicated institutional investors, is conducted by the conclusion of agreements like M&A. As a rule controlling interests are bought for the purpose of horizontal (purchase of a rival company) or vertical (access to companies of suppliers or consumers) integration. The direct sale of their shares to strategic investors can occur for: cash resources, shares of the strategic investor's company; debt instruments (notes) of the company of strategic investor by a mixed form – combination of the previous methods of payments.

When a company is sold to a strategic investor the total control over it is transferred by means of sale of investors' shares. One should remember about this fact. It assumes that other shareholders also can sell a part or all shares though a venture capitalist has the priority preferential right of sale. In the course of consideration of trade sale exit strategy they analyze the main potential strategic investors and the reasons by which they are interested in taking control over the whole company, and also the price that will ensure the necessary level of return of the invested means. It is necessary to define

possibilities of sale of the company after the example of M&A deals with other companies of the same or related branches of industry. They analyze prices of M&A deals, the size of purchased holdings, financial ratios, stock prices to the basic indicators of company's performance (EV/Sales, EV/EBITDA, EV/NI). The return (ROI, IRR) on investment depending on terms and the basic financial indicators of the company is predicted.

At the trade sale it is necessary to have the information on the companies interested in acquisition of the control over the company now and in the future at achievement of predicted indicators (as well as on the reasons of this interest); on that, whether a strategic buyer will be interested in the purchase of a product, an idea, a brand, a share of the market, technologies and sales channels; whether it is possible to sell the business in parts, whether buyers will pay attention to this fact and how much they are ready to pay and why. It is expedient to reveal as well examples of strategic purchases in a branch or sector of activity of the company, prices and terms of such purchases.

Initial Public Offering (IPO) – this is the offer of shares in the public market, primary public placement of shares of the company in the market where a wide range of investors can purchase them. There is an opinion that for the first time joint-stock companies offered their shares on the exchange to private investors, banks, trusts in the beginning of XVIIth century in Great Britain. However there are historical facts of much earlier public offering of enterprises of Europe. So, there is information in the registry of the Parisian exchange, that in 1250 a flour-grinding concern "Société des Moulins du Bazacle" issued in the market 96 shares in the form of certificates of title in the company for them to be sold "at the price which varies depending on economic conditions and on that how well or how badly mills operate" [167]. However the development of traditional IPO fell on the middle of XIXth century, during the heyday of "Gründerzeit" (Ger. Gründer – founder), large-scale feverish establishment of private enterprises, joint-stock companies, banks, insurance institutions, typical of the period of economic processes revival [168]. At that time one observed mass opening of industrial and financial organizations accompanied by credit expansion and large-scale issue of securities (shares and bonds) and exchange speculations. The modern history of development of IPO begins with liberalization of the global financial market – beginning of the 70s of XXth century. The most IPO exits fell on rapid development of IT companies in 1995-2000.

Traditionally IPO (Initial Public Offering) - the first public sale of shares of a joint-stock company among an unlimited circle of people. Shares can be sold for the first time (IPO proper) or can be offered by existing shareholders (SPO). In either case the IPO

acronym is usually used. In other words during an IPO an issuing company attracts for the first time external investors and by that turns from a private company when shares have been distributed only among the closed circle of shareholders, into a public company.

The purpose of an initial public offering is attraction of financial resources on an organized capital market. Investors put means in the company shares reconing on that, that firstly, value of shares will have increased and earnings yield will be higher than alternative investments and, secondly, calculating on dividends. Liquidity of shares, that is possibility to sell them quickly and return investments, increases appeal of shares to investors. In order to increase the liquidity of shares the companies declaring public offering, are interested in admission of their shares to trading on exchanges. Participation of shares of companies in trading sessions allows forming market value of shares and to create liquidity for them.

Thus, IPO performs the function of economic growth stimulation by attraction of new capital as well as long-range investment in economy. In 2002 – 2008 thanks to IPO long-range investment to the sum of over US\$ 11 billion was attracted into the economy of Kazakhstan.

One of the main principles of IPO is sequence principle, i.e. to go public a company should pass a number of consecutive procedures which can require significant material and time expenses.

The state regulation of the equity market is enacted by the National Bank of the Republic of Kazakhstan (authorized body).

There is no «initial public offering or IPO» term in Kazakhstan standard acts. Pursuant to the Law of the Republic of Kazakhstan “On Securities Market” from July, 2nd, 2003 of No. 461-II there is the treatment placement of equity securities – sale of securities in the primary stock market [46].

The mentioned treatment has the following definition: *issue of equity securities* – issuer’s activities directed on emergence of equity securities as civil rights object, or set of certain securities which are offered, circulated and redeemed according to the issue prospectus of the given equity securities.

1. Conditions and order of keeping of the State Register of Equity Securities are established by normative legal acts of the authorized body.

2. The equity securities, which issue has been cancelled or data about which have not been introduced into the State Register of Equity Securities, cannot be the object of transactions on the equity market.

3. Data on the registered equity securities and their issuers are entered by the authorized body into the State Register of Equity Securities within one day from the date when the authorized body makes a relative decision.

The issue prospectus of equity securities should contain the following data about:

- 1) issuer, its location and kinds of activity;
- 2) principal shareholders and (or) participants holding ten and more percent of shares in authorized capital of the issuer;
- 3) structure of bodies of the issuer with indication of information on executives, their posts in the last three years, and also data about quantity of the placed shares they hold (size of shares in authorized capital) of the issuer;
- 4) assets of the issuer with indication of their book value, about consumers and suppliers of products (works, services) of the issuer in the volume making five and more percent of total cost of products (works, services) manufactured or consumed by it;
 - 4-1) assets of the issuer making at least ten percent of total amount of assets which are collateral of issuer's liabilities, and have also been transferred to the entrusted administration with indication of cost of each asset and expiration date of relative agreements;

The part and parcel of the issue prospectus of equity securities are:

- 1) copies of the annual financial statement of the issuer for the last two fiscal years, confirmed by auditor's reports, as well as copies of auditor's reports and the accounting policy of the issuer (except for again created issuers);
- 2) copies of the financial statement of the issuer as of the end of the last quarter before submission of documents for state registration of issue of equity securities.

If there is no auditor's report of the financial statement for a complete fiscal year during the period from January, 1 till June, 1 of a current year then the issuer submits to the authorized body the financial statement for two years, prior to the last complete year, and the auditor's report of the financial statement for the mentioned period. The auditor's report and the financial statement for a complete fiscal year are submitted by the issuer within a month since the date of approval of the annual financial statement in the manner established by the legislation of the Republic of Kazakhstan.

Structure of the issue prospectus of equity securities as well as order of its drawing up and preparation are established by normative legal acts of the authorized body.

4. The issuer is obliged to submit to the authorized body amendments and additions in the issue prospectus of equity securities if there are any, within fifteen calendar days following the date they have been made (corresponding bodies of the issuer made a decision) for their registration in the manner established by the standard legal act of the

authorized body. If there is increase in quantity of declared shares and (or) change of type of the declared shares or reduction in number of bonds then the authorized body makes replacement of the certificate of state registration of issue of the declared shares (bonds). The registration of amendments and additions in the issue prospectus of declared securities (bonds) or replacement of the certificate of state registration of issue of declared shares (bonds) is conducted by the authorized body during fifteen calendar days.

The issue prospectus of equity securities is submitted to the authorized body in the state (Kazakh) and Russian languages.

The authorized body after getting from the issuer of necessary documents is obliged to make the decision on registration of the report or refusal to register.

The refusal in state registration of issue of equity securities (amendments and additions in the issue prospectus of securities) and suspension of the state registration of issue can occur in the following cases:

1. The authorized body has the right to refuse in state registration of issue of equity securities (amendments and additions in the issue prospectus of securities) in case of infringement by the issuer of terms and manner of submission of documents for state registration of issue and revealing in the course of consideration of documents of their inadequacy to the requirements established by the legislation of the Republic of Kazakhstan.

2. The authorized body has the right to suspend state registration of issue of equity securities (amendments and additions in the issue prospectus of securities) if during the process of consideration of submitted documents the need to get additional data about the issuer and its activity emerged. The authorized body resumes state registration of issue of equity securities (amendments and additions in the issue prospectus of securities) following the date of submission of additional data by the issuer.

3. The issuer has the right to appeal against the decision of the authorized body to refuse state registration of issue of equity securities (amendments and additions in the issue prospectus of securities) judicially.

It is necessary to notice, that IPO term can be used concerning initial public offering of any securities (stocks, bonds, shares and deposit receipts). However in practice of world investment community IPO concept is used mainly with regard to stocks.

The state registration of issue of declared shares is conducted according to the Law of the RK «On Securities Market» from July 2, 2003 of No. 461-II, article 11 where it is detailed, that:

1. The decision on the state registration of issue of declared shares is made by the constituent assembly (the single founder) or stockholders meeting (shareholder holding all voting shares) of a joint-stock company.

The joint-stock company is obliged to submit documents to state registration of issue of declared shares within thirty calendar days:

1) from the date of its state registration as a legal entity;

2) from the date when stockholders meeting makes the decision on registration of issue of declared shares in case of cancellation of issue of declared shares on the basis of the court decision about recognition of issue of declared shares invalid.

The authorized body has no right to conduct state registration of issue of declared shares after one year from the date of joint-stock company registration as a legal entity or from the date of cancellation of issue of declared shares of a joint-stock company on the basis of a court decision.

The authorized body has the right to go to the law with the purpose of dissolution or reorganization of a joint-stock company in cases, if after one year:

1) from the date of state registration of a joint-stock company as a legal entity a joint-stock company has not submitted documents to state registration of issue of declared shares;

2) either from the date of joint-stock company registration as a legal entity or from the date of cancellation of issue of declared shares of a joint-stock company on the basis of a court decision the issue of declared shares has not been registered by the authorized body.

It is binding, the decision of the constituent assembly (the only founder) or stockholders meeting (shareholder holding all voting shares) on the state registration of issue of declared shares must contain:

1) place and date of holding of the constituent assembly (shareholders meeting) with indication of the name and the location of the issuer;

2) list of the founders participating in the constituent assembly, or data about quantity of voting shares of a joint-stock company, presented at shareholders meeting;

3) kinds of shares and their total number;

4) quantity of the shares distributed among founders, and procedure of paying up of shares by them;

5) principal value of the shares distributed among founders.

3. The state registration of issue of declared shares is conducted on the basis of the following documents submitted by a joint-stock company:

1) application drawn up in any form;

2) copy of the constituent assembly minutes (decision of the single founder) about state registration of issue of declared shares or shareholders meeting (shareholder holding all voting shares) about registration of changes in the issue prospectus of declared shares;

3) copy of a charter of a joint-stock company;

4) certificate of state registration (re-registration) of a legal entity;

6) prospectus of share issue in duplicate;

7) documents confirming paying up of declared shares, placed among company promoters.

If the submitted documents comply with the legislation requirements of the Republic of Kazakhstan the authorized body conducts state registration of issue of declared shares by giving them national identification number (national identification numbers) and issuing (sending) to the joint-stock company the certificate of the state registry of issue of declared shares and one copy of a prospectus of issue of declared shares with a mark of the authorized body about state registration of issue of declared shares.

- Procedure of giving a national identification number (national identification numbers) to declared shares is established by the standard legal act of the authorized body. All declared shares of one kind have a common national identification number.

- Registration of the rights by shares of founders (the only founder) of a joint-stock company is conducted by the registrar after state registration of issue of declared shares.

- The joint-stock company has the right to make the decision on increase in quantity of declared shares after confirmation by the authorized body of the report on results of placement of declared shares proving that company founders have met their commitment to pay up shares.

Requirements for disclosure of information by issuers.

The issuer which controlling interest expressly or by implication belongs to a national controlling holding company, when offering shares on an organized equity market with the purpose of implementing the decision of the Government of the Republic of Kazakhstan has no right to sell shares to foreign citizens and (or) to legal entities, as well as to stateless persons (given item is valid till January, 1, 2016). The issuer (underwriter, issuing consortium) has the right to make distribution of equity securities by holding an auction or subscription in an unorganized equity market.

Distribution of equity securities in formal equity market is made according to internal documents of an organizer of trading.

The issuer is obliged within ten calendar days after the decision was made by a relative body of the issuer to distribute equity securities among an unlimited circle of investors to publish in mass media in the state (Kazakh) and Russian languages a notification of distribution of equity securities.

Notification of distribution of equity securities must contain:

- 1) full name and location of the issuer;
- 2) date of state registration of issue of equity securities, their kind and quantity which is subject to distribution;
 - 2-1) information on terms and manner of shareholders to preempt shares;
- 3) information about subdivision and officials of the issuer, name and location of an underwriter (issuing consortium) through which one can become familiar with the prospectus of issue of equity securities or other data about them;
- 4) information about the price of distribution of equity securities and their payment.

Distribution of equity securities in an unorganized equity market is made by holding an auction or subscription on the basis of written applications submitted by investors to the issuer (underwriter, issuing consortium). Conditions and procedure of holding auctions or subscription are established by internal documents of the issuer and must contain requirements to investors, intended to acquire distributed equity securities.

Investors' right to get information on issue of equity securities:

- At distribution of equity securities the issuer (underwriter, issuing consortium) is obliged at investor's request to present him for acquaintance the prospectus of issue of equity securities or its copy.
- The issuer (underwriter, issuing consortium) has the right to collect payment from an investor for giving a copy of the prospectus of issue of equity securities at the size which does not exceed the amount of costs for its production.
- The investor has the right to address to the authorized body with the inquiry to check compliance of a copy of the prospectus of issue of equity securities to the one which the authorized body has, by having submitted to the authorized body the given copy for this purpose.

Report on the results of distribution of equity securities.

For consideration and approval of the report on the results of distribution of equity securities the issuer submits to the authorized body the following documents:

- 1) application for consideration of the report on the results of distribution of equity securities;
- 2) financial statement as of the end of accounting month or for expiry date of distribution of equity securities;

3) report on the results of distribution of equity securities, drawn up and prepared according to the requirements established by standard legal acts of the authorized body.

In case of issue of mortgage and other bonds secured with mortgage of the issuer, the issuer submits the documents proving the existence of contract of pledge, registered in concordance with the legislation requirements of the Republic of Kazakhstan.

2. The issuer is obliged to submit to the authorized body reports on results of distribution of equity securities following the results of each six months (during one month following the end of the accounting half-year) until complete distribution of equity securities, and also within a month after end of their complete distribution.

The report on the results of distribution of equity securities is considered by the authorized body within fourteen calendar days.

The authorized body has the right to refuse in confirmation of the report on results of distribution of equity securities if in the course of consideration of documents the facts of their inadequacy to the requirements established by the legislation of the Republic of Kazakhstan are revealed.

In case of the refusal to confirm the report on the results of distribution of equity securities the issuer has to resubmit to the authorized body an improved report during thirty calendar days since date of refusal.

The repayment (management buy-out, MBO, management-buy-in, MBI) – one of the exit strategy of venture capitalists, providing for the sale of their shares in property to managers and/or founders of a venture enterprise. Such repayment can occur in various forms: direct repayment of shares in property sold earlier from venture capitalists for own means of managers/founders of enterprises, or in case of shortage of such means – by attraction of new financial institutions (including new funds of the venture capital or those of direct investments) which redeem at managers' request shares in property of former investors of a venture enterprise.

Stakes in business entrepreneurs (founders, trusts of managers) – management buy-out (MBO) redeem in various forms: direct repayment for cash means; through leverage buy-out (LBO); issue of debt instruments (notes) by an enterprise.

At management buy-in (MBI) buyers are individual and institutional professional investors, venture capitalists and banks. Unlike the trade sale, MBI does not necessarily assume that such investors will get controlling interests of companies. MBI with venture capitalists can take the form of bridge financing that is reception by new venture capitalists convertible into shares or nonconvertible notes in exchange for monetary funds, provided to managers of a venture enterprise for repayment of shares in property

of investors of the previous rounds of venture investment. Bridges loans are usually granted by specialized venture capital funds.

When planning exit strategy it is necessary to approach thoroughly to forecasting of possible further developments.

Provided the strategy of repayment is used the basic questions of planning are related to: estimation procedure of investor's share; parameters and indicators of company performance; regarding what companies and by what financial ratios it is possible to calculate the multiplier of company value in the course of repayment of investor's share in property.

15.2. Advantages and disadvantages of investors' exit strategies

Generalization of materials allowed revealing both advantages and drawbacks of the main investors' exit strategies [153; 154]. So, there are:

1) Exit strategies through: direct sale of their stakes to strategic investors – *trade sale*; public or private floatation of shares (IPO, PO); repayment of stakes in business by entrepreneurs (founders, trust of managers) - *management buy-out* (MBO); sale of shares in property to other investors (individual or institutional) for capital replacement – *management buy-in* (MBI); dissolution of such enterprises, sale of assets and writing off of debts.

2) Advantages of the main strategies:

- simplicity and less duration of conclusion of a contract;
- rather low expenses for organization and signing of a deal;
- use of various forms of sale and modes of payment, advantageous to an entrepreneur (sale on notes, buying company shares);
- access to a significant source of additional financial resources;
- higher requirements to volumes of incomes, growth rates, volumes of transactions made by a company;
- improvement of a financial condition of an enterprise that allows attracting credits on beneficial terms more rapidly;
- increase of image of an enterprise, growth of trust at partners, of liquidity of shares and enterprise value;
- company remains to be owned by managers, company development direction is constantly supported;

- use of various forms of delay of payment by managers through bank lending and bridge financing is possible;

- entry of new venture investors will not mean that one has lost the company for good, as they also plan to exit in the future through resale;

- high interest of such investors in maximization of value of their shares, support and necessary improvement of the company;

- acquisition of negative experience of investment and business dealing.

3) Drawbacks of the main strategies include:

- sale of only enterprise controlling interests;

- sale prices can be lower than at alternative exit strategies if there is no significant amount of buyers;

- need to attract intermediaries to search for investors, conducting marketing campaigns of sale of the enterprise, administration of guarantees to potential investors;

- loss of confidentiality of information because of large-scale dissemination;

- restriction of actions (strategic administrative decisions) of managers by new shareholders;

- possible loss of the control over the enterprise because one investor has holding of shares;

- necessity of attraction of financial advisers, underwriters (service payment of 5-12% of the sum of IPO), lawyers, experts in duplication of prospectuses and roadshow organization;

- considerable expenditure of time and financial resources for organization and placement of shares;

- difficulties in definition and estimation of company value;

- possible conflicts regarding selection of business value evaluation procedures, harmonization of sale prices (of venture capitalist) with a purchase price (by managers) of shares in property of the enterprise;

- entry of new investors can dramatically change policy of the company and directions of its development;

- possibility of loss of control over the company;

- it does not bring expected return of means;

- possible financial losses, sale of material and intangible company assets.

Achievement of indicators of cost-effectiveness depends on a reasonable choice of investors' exit strategies and "exit" proper as for investors, founders (managers) of a venture enterprise, as for all interested venture entrepreneurship subjects expressly or by implication participating in the venture activity.

15.3. Peculiarities of investors' exit through the stock market

Development of venture stock exchange infrastructure of the USA. Since the middle of the XXth century there began formation of new equity markets, in particular specializing in accumulation of financial resources for development of young fast-growing innovative firms. Creation of such markets ensured facilitation of possibilities of access of such firms to funding sources, and also opened new ways of investors' exit.

Initial public offering (IPO) – one of the main routes of investors' exit. Placement of shares proper demands a developed stock exchange infrastructure. That is why stock exchange maturity – important factor of venture business development – promotes formation of conditions for accumulation of new investment resources and ensures liquidity of venture investments. The stock exchange should promote a free exit of venture capital funds as a result of sale of holding of stock being at the stage of «seed», «start-up».

An IPO also promotes development of innovation projects and companies. IPO market development promotes development of innovative branch and venture financing as creates an effective method for venture investor to exit the business. There is a direct interrelation between an IPO and innovative investment as an IPO is a final stage of the closed investment cycle, existing in the countries with developed economy. At that the venture capital is able to develop successfully provided that a venture investor has possibility to “exit” his portfolio companies through an initial public offering of their shares on stock exchange [1].

As a rule, the decision to do an IPO is made long before an IPO, and process of preparation of the company to the public status can take up to several years. For successful placement of its shares the company should undergo a number of the established procedures. First, it should prepare itself for the public status and form a team which members, as a rule, are investment banking firms, law firms, PR agencies that is all who will participate in bringing the company to listing.

The following step on the way to publicity is making financial and legal examination which purpose is to prove conformity of business of the company to the data declared by its management. Then it develops and submits the issue prospectus to registering bodies and to the stock exchange simultaneously forms syndicate of underwriters who later conduct a number of roadshows and presentations for potential investors. Next the underwriters together with investors establish an initial price of company shares, do an IPO and sum up.

Taking into consideration the history of development and spread of the venture business in the USA, we will address to study of specially created objects of stock exchange infrastructure in this country for realization of exits of venture investors. It is here where there is a developed stock exchange for young hi-tech companies. It is known, that with the participation of the National Venture Capital Association the National Association of Securities Dealers (NASD) was created – association of venture capitalists, exchange dealers, bond houses and other investment institutes for formation of mechanisms of support of economic and innovative development in the USA.

Development of American stock exchange venture infrastructure originates in 1938, when the United States Congress adopted the document titled Maloney Act [164]. For the purpose of regulation of over-the-counter turnover in the USA a number of nongovernmental structures – self-regulatory organizations was created. This act obligated all brokers who were not members of the exchange (there were much more of them than brokers-members of exchanges) to join Self-Regulatory Organization (SRO) which would be responsible for regulation of the over-the-counter market. Next year such SRO was established. This is the National Association of Securities Dealers (NASD). It is still the largest self-regulatory organization in the USA.

Duties of the NASD include: - adoption of rules and procedures to prevent fraudulent and manipulative actions on the stock exchange of the USA; working out measures to prevent infringements of the securities legislation by its members, norms or rules of the NASD proper; - working out for all participants of trade of fair and identical principles; -protection of interests of investors and a society.

Occurrence and development of The Nasdaq Stock Market. In 1968 on the initiative of The United States Congress the Securities and Exchange Commission specially investigated an unsatisfactory condition of the over-the-counter market.

Owing to absence or irregular publication of financial reports of the companies, as well as low liquidity of their shares according the results of investigation the NASD was entrusted to systematize and automatize the whole retail equity market of the USA. In the late 60s there started an active development of computer technologies that helped to solve this problem. So the over-the-counter electronic system of security trading – National Association of Securities Dealers Automated Quotations (NASDAQ) was created. The first deals at this exchange were made on February, 8, 1971. At first the NASDAQ was just an information base, "bulletin board" where average, and subsequently the best quotations of dealers of the over-the-counter market.

In 1982 shares of the American companies meeting high requirements of listing, were organized in the NASDAQ National Market (NNM). First of all it was made in

order to weed out small companies which aspired to be listed in the system. To perform this task, rules of participation of companies in activity on the National Market became tougher. In 1990 the second group of shares representing companies with small capitalization (about 40% of total number of companies) was formed – NASDAQ Small Cap Market (SCM) [158,168].

Since 1984 on the exchange the Small Order Execution System (SOES) started to operate. This system allowed executing orders of small volume against the best quotations of market makers that seriously expanded trading opportunities of the exchange [154]. Since 1990 the Select-Net-System was launched which expanded possibilities for placement and implementation of agreements.

The NASDAQ system has three levels:

The first – for the registered official representatives and their clients.

Terminals of *the second* level combine market makers with broker-dealers, who resell securities to the population and institutional traders.

The third – intended solely for market makers, differs from the second level by availability of additional keys to a keyboard with the help of which it is possible to enter, change or update quotations in the NASDAQ system.

NASDAQ supports close connections with the New York Stock Exchange, the American Stock Exchange, the Securities Industry and Financial Markets Association and other groups of firms. Let us note: NASDAQ supervises the over-the-counter market, and the government supervises the association. All changes in the internal order and instructions of the NASDAQ are subject to the obligatory approval in the government body – the Securities and Exchange Commission (SEC). The SEC – the government agency – has the right to suspend or revoke registration of SRO, to impose restrictions on its activity, to displace the head or employee of SRO if s/he has deliberately infringed the Stock Exchange Act or abused one's office.

In the USA there are several more SROs besides the NASDAQ, particularly the Amex, et al.

The NASDAQ Stock Market is the second largest stock exchange after the NYSE. It is situated in New York. A trading session in the NASDAQ is opened at 9.30 am. and is closed at 4 pm. Trading operations are hold on the basis of platforms SuperMontage and Pritex. Quotations are electronically transmitted from a computer center to specially mounted TV screens, located in brokerage firms across the country.

The trading scheme at The NASDAQ Stock Market differs from the traditional trading on the exchange. Several market makers (there are about 600 of them) compete for order execution of a client here. The market makers' principal function – continuous

provision of quotations and liquidity maintenance of certain shares group during trading. That is a market maker must execute the client's order using his own funds in case there is no appropriate opposite order at the market. Some market makers support hundreds of shares, others – thousands. On average for one kind of shares the liquidity is supported by 14 market makers, and for certain shares – about 50. NASDAQ quotations – the result of quotation correlation, provided by market makers and alternative trading systems.

The NASDAQ Stock Market. NASDAQ National Market (NNM) – market for securities of the largest issuing companies, most actively trading on this exchange; started to operate in 1982. Nowadays more than 4 tsd. securities are circulated in the system. To be listed on the NNM a company should meet strict criteria of a financial status, capitalization and corporate management [20].

NASDAQ Nasdaq Small Cap Market (SCM) – NASDAQ market for shares of small capitalization companies. The SCM listing includes more than 1 tsd. securities.

Computer trading systems SOES. SOES – Small Order Execution System. It was meant for day traders dealing on the NASDAQ market in holding of shares up to 1 tsd. SOES helps small investors to get access to NASDAQ system and its market makers. The system was launched after the Stock Market Crash of 1987. To maintain liquidity of the market for ordinary investors became its main task. SOES allowed individual investors to perform operations concerning shares of NASDAQ with institutional investors which constantly inform about bid-and-asked quotations. Market makers' participation in SOES concerning shares of NASDAQ became compulsory in 1988 as during the Stock Market Crash of 1987 a great deal of small investors could not get access to quotations of market makers. Till this moment brokers for execution of clients' orders had to call to market makers. During the stock market crisis it was virtually impossible to do it, and quite a few clients' orders remained unexecuted. SOES had to ensure for individual clients the access to NASDAQ Market, consequently – strengthen trust in it. Now SOES is not used on the exchange.

SelectNet system. In 1988 at The NASDAQ Stock Market the Order Confirmation Transaction service (OCT) was placed in operation. During this period there extended possibilities of conducting negotiations between the seller and the buyer, and directing an order to all market makers simultaneously.

ECN SuperSOES SuperMontage system – new integrated order entry and execution system. It was officially launched on October 7, 2003 in Europe, and on October 14 – in the USA as well. SuperMontage has replaced out-of-date platform SuperSoes and serves for stock trading on the NASDAQ National Market and the

Nasdaq Small Cap Market. Besides, it gives access to trading in shares which are circulated on other exchanges of the USA.

The NASDAQ Indexes. As any trading system, the NASDAQ Stock Market has a number of its business activity indexes. Now there are 13 of such indexes which are based on quotations of securities traded in NASDAQ electronic system.

The Nasdaq Composite Index is an indicator that averages the prices of all the stocks traded through NASDAQ. It contains more than 5 tsd companies (both American, and foreign), included in the listing of the NASDAQ. Shares of each of them influence the index in proportion to their market value. The market value is calculated as follows: the total number of shares of a company is multiplied by a current market value of one share. They began to calculate this index on February 5, 1971 from the level of 100; in 2000 it reached 5 tsd point, but after the general falling of the market of computer and information technologies is now within the range of 2 tsd points.

The Nasdaq National Market Composite Index as a matter of fact is similar to the Nasdaq Composite Index with the difference that it is composed on the basis of shares of the companies, included in the listing of the National Market.

The NASDAQ-100 Index is calculated on the basis of market capitalization of 100 largest companies of nonfinancial sector registered on The NASDAQ Stock Market.

Besides the mentioned, there are also the NASDAQ Bank Index – for companies of banking sector, the NASDAQ Biotechnology Index – for medical and pharmaceutical companies; the NASDAQ Computer Index – for software and hardware developing companies; the NASDAQ Financial Index – for companies of financial sector, except banks and insurance companies; the NASDAQ Industrial Index – for industrial companies; the NASDAQ Insurance Index – for insurance companies; the NASDAQ Telecommunications Index – for telecommunication companies.

Development of venture stock exchange infrastructure in Europe. In the mid-1990s of the XXth century in Europe a number of markets was established for the purpose of giving to companies opportunities to attract an additional capital, traditionally offered to start-up enterprises, which have been operating in the market at least for two years, but do not meet certain financial criteria. Such criteria include the minimum size of own means, readiness to issue a minimum quantity of shares at minimum cost and so on. In Europe there is a network of new national markets: NMAX in Holland, NeuerMarkt in Germany, NM Belgium in Belgium, and Nouveau Marche in France et al.

With the participation of the European Private Equity & Venture Capital Association the European Association of Securities Dealers (EASD) emerged – association of venture capitalists, exchange dealers, bond houses and other investment

institutes for formation of mechanisms of support of economic development and innovations in Europe. Creation of the European stock exchange for young companies which actively grow, the European Association of Securities Dealers Automated Quotation (EASDAQ) system became one of the first initiatives of the EASD. Its structure and operation principles were adopted from similar American structure – NASDAQ. The exchange has no trading platform, since November, 1996 an electronic trading system has been used. Companies from Great Britain, France, Germany, the Netherlands, Switzerland, Austria, Belgium, Portugal, Italy, Denmark, Finland, Greece and Luxembourg take part in EASDAQ trading. Shares of some companies of the EASDAQ are also listed on the American NASDAQ Stock Market [14].

Conclusion. The main investors' exit strategies are: direct sale of their stakes to strategic investors (trade sale); public stock floatation (IPO); private offering (PO); repayment of stakes in business by entrepreneurs (founders, trust of managers) – management buy-out (MBO); sale of shares in property to other investors (individual or institutional) for capital replacement – management buy-in (MBI); dissolution of such enterprises, sale of assets and writing off of debts.

The Law of the Republic of Kazakhstan "On Securities Market" from July 2, 2003 of No. 461-II stipulates basic stages of conducting and requirements to the primary and secondary market of equity securities, special features of the account and registration of securities of issuers, requirements to information disclosure by issuers and peculiarities of their accountability to authorized bodies.

Test questions and tasks

1. What basic strategies of investors' exit do you know?
2. Name the advantages and drawbacks of the exit strategy through an IPO for founders and managers of a venture enterprise.
3. Reveal the essence of initial public offering.
4. Reveal the special features of venture stock exchange infrastructure.
5. Analyze the requirements to initial public offering (IPO) in the legislation of the Republic of Kazakhstan.
6. Tell about the main stages of an IPO.
7. In what forms can repayment of stakes in business by entrepreneurs (founders, trust of managers) occur?

8. Characterize the main distinctions between management buy-out (MBO) and management buy-in (MBI) exit strategies.
9. Consider the stock exchange infrastructural objects serving the venture capital market in the USA and Europe.
10. What NASDAQ Indexes do you know? What do they reflect?

16. USE OF EXTERNAL VENTURE FINANCING SCHEMES OF PROJECTS

16.1. External ventures and forms of their organization

The external scheme of venture financing provides for creation of organizations, which in the venture business sphere are called external ventures.

External ventures are complex integration and cooperation structures, created on the basis of privity of contract among independent entrepreneurship subjects to combine financial, labor, information, material and other resources, for joint realization of separate stages of innovation projects in order to commercialize innovations.

The external venture belongs to rather complex organization forms of venture entrepreneurship. Difficulty in identifying such venture enterprises consists in necessity of definition of structures and associations, where innovative enterprises are included, which can be bound by various contractual relations simultaneously with many organizations within the limits of scientific and technical clusters on constant or temporary (long- or medium term) basis. The basic differences between internal and external ventures are given in table 16.1.

External ventures are an important form of innovative entrepreneurship, one of organizational strategies of financing of innovative development under conditions of high uncertainty of environment in markets with growth opportunities. They can be created by one or several large corporations as intercompany research institutes, scientific and technical alliances, research consortia and joint enterprises. An external venture can be structured in several modifications organizationally registered as research consortia, venture strategic alliances, innovative clusters et al.

16.2. Control of venture strategic alliances

According to research data of the Boston consulting group, by signs of level of competitive relations and sphere of cooperation between participating companies they distinguish four types of alliances: cooperation alliances; business alliances; appraisal alliances; alliances of M&A type.

Appraisal alliances (research alliances) are established between noncompeting partners for the purpose of exchange of expertise and opportunities in research sphere. Within the frameworks of such alliances outsourcing or license agreements about fulfilment of separate stages of innovation projects are concluded [92].

Table 16.1.

Differences in creation of internal and external ventures

Comparative signs	Internal ventures	External ventures
1	2	3
Ways of creation	Separation of the group of employees from a parent enterprise	Contractual association of participants for joint implementation of a project: <ul style="list-style-type: none"> • creation of a new legal entity – joint venture (injection of resources, required for project implementation, into the authorized fund); • fulfilment of separate stages by participants of the project without creation of a new legal entity, in this case a coordinating board of the project is established
Sources of financial resources	Financial resources from affiliated intracorporate venture capital funds. Venture capital fund participants can be other enterprises having shares of ownership in it	Project participants contribute financial resources
Sources of other resources	Other resources can be received from the parent enterprise according to intracorporate agreements	Project participants inject resources necessary for implementation depending on requirement in them by stages of implementation of the project
Establishment of a legal entity	Creation of a new legal entity, in which a venture capital fund and a parent company hold shares	Establishment of a legal entity (statutory association) or non-statutory association on the basis of cooperation contractual links
Inclusion of stages of innovation processes	Development-introduction	May include only stages of introduction (in a case when one of participants contributes intellectual property to the project) or stages of both development and introduction (when resources necessary for implementation of the project are invested in an innovative enterprise)
Duration of cooperation	Fund's resources are invested for a certain period (3-7 years). Return of means of investors occurs after the termination of term of investment	Resources are put for the period of project implementation
Remuneration of investors	The income of a venture fund and a parent company from sharing in the capital of invested enterprises	Remuneration of project participants depends on association type: statutory association – income from sharing in enterprise capital, synergetic effects and so on depending on object of arrangements. Non-statutory association – depending on object of arrangements and forms of external ventures

There is no precise definition of alliances. They belong to corporate flexible formations, i.e. contractual associations of organizations which activity is co-ordinated for achievement of common goals without obligatory creation of a legal entity. Modern practice of development of forms of co-operation among enterprises shows, that companies have more than one alliance, usually participating in several alliances, different by their essence and scope of coverage [10; 94-97; 111]. It demands working out of corresponding approaches to management of processes of creation, functioning and termination of activity of alliances. Mainly under such conditions they create specialized offices of management of alliances. Offered by Royal Philips Electronics a matrix of division of all alliances with account of two factors – level of synergetic effects, received from participation in alliances; and duration of cooperation among participants within the limits of alliances, allows distinguishing four groups: alliances of relations, corporate alliances, business alliances and strategic alliances [123]. Strategic alliances – the most long-term relations among companies on joint researches, designing and development, production and advancement of new products, works and services.

Venture alliances, according to the given typology, related to appraisal alliances and strategic alliances. They are of long-term nature as for cooperation, provide for joint investment of activity throughout many years, distribution of risks and limited resources, as well as sharing of benefits (effects) which become possible as a result of joint activity within the limits of an alliance, remaining independent economic agents. Venture alliances are an effective form of revealing new strategic chances of growth, definition of new sources of development and assistance to business. For small innovative firms – this is the use of potential of joint research of markets, production and adoption of new products, advancement through access to global marketing and sales networks of powerful partners within the frameworks of an alliance, openness and access to geographical markets.

A variety of forms of external venture entrepreneurship predetermines the difficulty in research of tendencies and regularities in systems of planning and organization of their innovative activity. External venture formations arise in forms of venture strategic alliances, joint ventures, scientific and technical consortia, innovative (technological) cluster et al. Let us address to the review of special features of planning and organization of activity of venture strategic alliances.

Generalization of literature sources and own researches of the authors allowed drawing a conclusion, that the *venture strategic alliance (VSA)* is the union (cooperation) of two and more independent organizations joined by the agreement (mostly several) which is based on confidential mutual relations and has been concluded

for the purpose of achievement of purposes directed on development and commercialization of innovations through pooling financial, labor, material, information, technological resources and joint (coordinated) management of venture innovation projects.

"Independent" venture enterprises can enter in VSAs at different stages of life cycle. Depending on the stage of venture enterprise development organizations ensuring performance of tasks and works, immediate at such stages of innovative venture process enter in VSAs. Directions of cooperation of venture enterprises with other organizations are R&D, marketing researches, commercial tests of novelties, and production of trial lots of novations, marketing of innovative production, formation of sales channels and advancement of innovations to the market. Depending on directions of cooperation, a stage of development of a venture enterprise the purposes and tasks of VSA vary. However, despite these factors, it is necessary for each venture enterprise, its managers to plan process of selection and involvement of strategic partners to venture innovation process. Efficiency of functioning of VSA and degree of achievement of purposes of a venture enterprise on a way of production and commercialization of innovative production depends on quality of the planned and right choice of strategic partners. The review of publications [8; 37] allowed proposing the sequence of stages of process of search for partners, their selection and signing of contracts for creation of VSA (fig. 16.1).

At the first stage of formation of VSA they study the status and needs for resources, the list of necessary works of venture innovative activity, possible directions (R&D, marketing, production and sales) and variants of cooperation among enterprises. At the second they define purposes of a venture enterprise which it aspires to reach as participant of VSA. At the third stage they make a list of probable partners by cooperation directions. Then it is necessary to form selection criteria of strategic partners, to analyze the financial condition and future activity of potential partners for the purpose of revealing of their actual goals of cooperation in VSA and possibilities to meet their obligations. The following stage assumes forecasting and definition of future benefits (effects) from cooperation which can be received as a result of execution of the venture innovation project. Then they choose participants of VSA for implementation of the venture innovation project, define future benefits which are received by potential participants of VSA, i.e. "contribution - advantages" allocation card of all partners of VSA is formed, conformity of expected benefits – effects of partners and the venture enterprise proper to the purposes, probability of achievement of goals by each participant of the alliance is defined.

If distribution of benefits from venture activity satisfies partners of VSA, the following stage - process of preparation and signing of a series of contracts (agreements) for performance of joint activity begins.

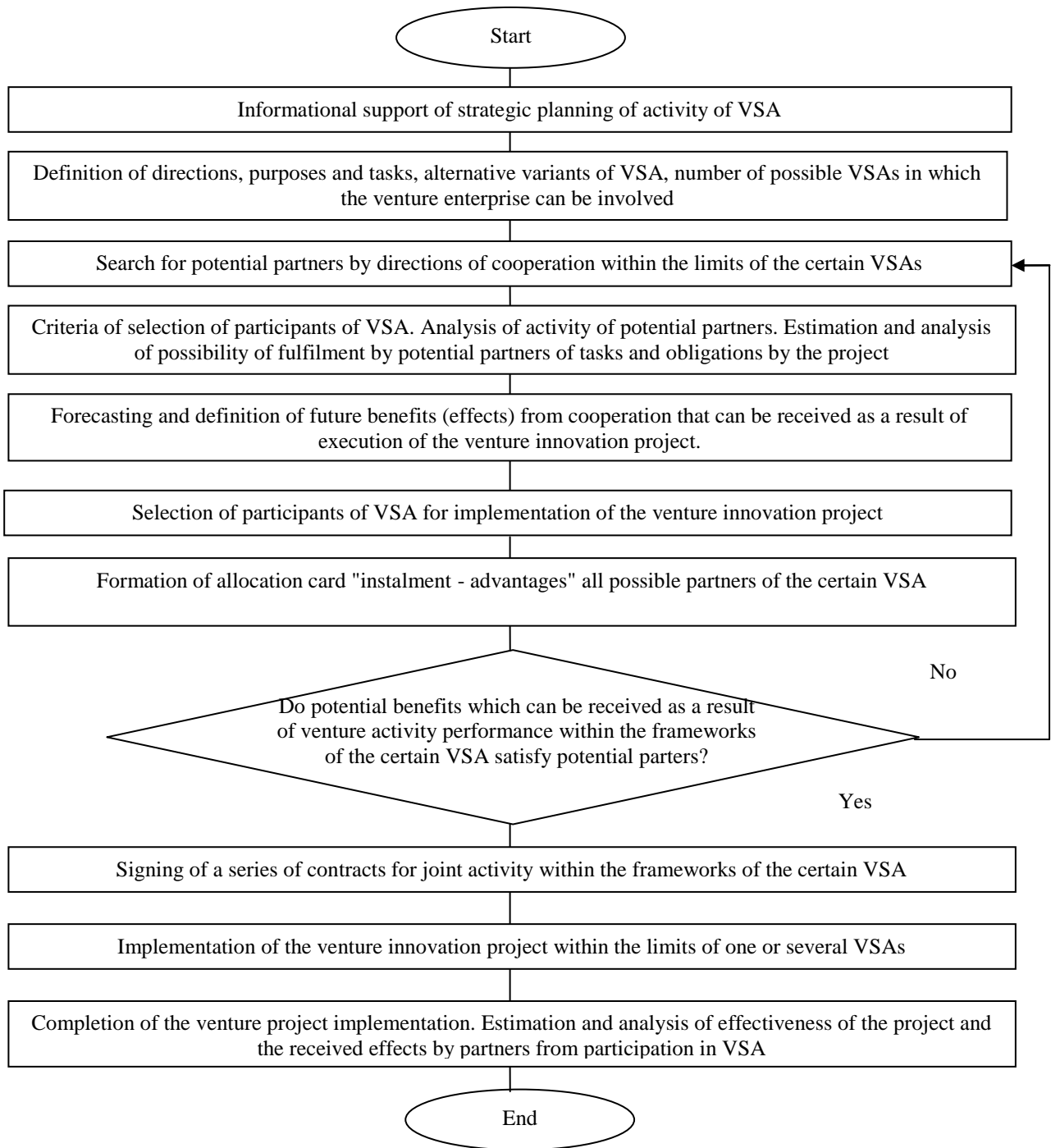


Fig. 16.1. Sequence of stages of formation of venture strategic alliances

The choice of strategic partners-potential participants of VSA – should meet certain criteria. Let us distinguish the following selection criteria of potential partners and participants of VSA:

1. Compatibility, interconsistency of strategic plans for venture enterprise development and its potential partners within the limits of operation of VSA.

2. Coincidence, interdependence of the purposes of partners and those of the venture enterprise, degree of their attainability depending on effectiveness of execution of the venture innovation project. Interconsistency or possibility of coordination of the purposes of partners and the venture enterprise.

3. Ensuring possibilities of fulfilment by potential partners of tasks and obligations by the project, their coordination according to plans of use of resources of the project.

4. Degree of mutual trust among partners. Establishment of relations among partners. Close connections will ensure possibility of coordination of future questions at issue in the course of operation of VSA. Impossibility to foresee all uncertain questions in contracts. Questions at issue should be resolved on the basis of mutual trust among partners.

5. Compatibility of corporate cultures, values, methods of following the mission of partners of VSA.

6. Degree of satisfaction with distribution of future benefits (effects) among partners, received as a result of joint execution of the venture innovation project. Each participant of VSA should be as interested as possible in positive results of the venture project. The higher interest of the participants, degree of dependence of satisfaction of their purposes on the results of the venture project, the higher trust among partners.

Future benefits should be distributed fairly on the basis of contribution made by participants of VSA to achieve the common result. That will ensure effective motivation of participants of VSA; keep the latter from disclosing a confidential information of the project outside of VSA etc.

7. Competitive advantages partners of VSA have in fulfilment of necessary stages of the project. The quality result of the project should be guaranteed by competitive advantages of each of participants of VSA. That is performance of works by each participant of VSA should be guaranteed by existence of significant competitive advantages in performance of a certain direction of works in comparison with other possible participants and competitors.

8. Taking into account the influence of results of venture activity of an alliance on competitive positions of partners of VSA of similar directions of activity. Revealing the

potential causes of conflicts of interests of the partners concerning their cooperation obligations and competitive positions in the market.

To choose directions of activity and kind of VSA it is expedient to define levels of venture enterprise potential (production and sale, innovation or market) and opportunities to complete an insufficient level of one or another potential. If certain prospective participant of VSA has no sufficient potential to ensure implementation of the venture project, the enterprise can participate in several strategic alliances.

Advantages of a venture enterprise concerning creation of venture strategic alliances are [8; 37]:

1. Legal independence of partners (participants) of VSA. That guarantees removal of necessity of organizational changes in structure of management of participating enterprises of VSA, adaptation and shift of the majority of employees of the partner organizations to other posts.

2. Contractual nature of cooperation. It ensures decrease in expenses for integration procedures, reduction in transaction costs during the operation of VSA. Within the limits of VSA a Committee of coordination of actions is established. That guarantees flexibility, mobility in making decisions in the conditions of a fast-changing environment.

3. Possibility for a venture enterprise to take part simultaneously in several strategic alliances that allows diversifying risks of innovative activity and increasing competitiveness of the venture project by attraction of competitive participating partners in spheres where the venture enterprise has an insufficient growth potential.

4. Possibility to achieve a monopoly position in the market. It is such de facto, but legally has not been confirmed, since VSA – union (association) of the independent participating enterprises.

5. Participation of domestic enterprises in international VSAs. It opens a way to integration into global corporate structures and helps to enter the world markets of resources.

6. Decrease in time periods of performance of works of the venture project that is guaranteed by the use of competitive advantages of each of participants of VSA in that sphere or kinds of works which the concrete partner can perform as efficiently as possible.

7. Saving of resources by the use of economy of scale and synergy, adjustment of systems of exchange of knowledge within the frameworks of VSA, improvement of systems of control and coordination of kinds of works in the venture project;

mobilization of financial resources for performance of separate works of the project by "just-in-time" principle.

Disadvantages of a venture following from its participation in VSAs:

1. Contractual nature of cooperation, significant degree of uncertainty, typical of venture activity, does not allow predicting and co-ordinate all probable questions regarding which disagreements may arise in the future.

2. Drawbacks (inaccuracies) in signed agreements among participants of VSA can give occasion to occurrence of disagreements in distribution of the rights to intellectual property objects, transfer and disposal of such rights, and also unauthorized disclosure of the data being commercial classified information.

3. Possible decrease in mutual trust among VSAs leads to difficulties in finding consensus for strategic issues of activity and development of VSA and reduces probability of prediction of future actions of participants of such alliance. The lower the level of mutual trust among partners, the more time one needs to spend on the coordination of actions among them. Duration of negotiating process concerning the solution of certain questions increases.

4. Mismatch of the goals and objectives of participants of VSA, which can be changed at each partner in the future, and inconsistency of the purposes of partners will impede achievement of those of the venture project.

5. Unreliability and instability of personal composition of a Committee of coordination of actions within the limits of VSA. Occurrence of several administrative centers of VSA depending on authority, financial importance of participants of such alliance is probable.

6. Decrease in efficiency of the control over participants of VSA concerning fulfilment of their obligations by them by the project.

7. Possible early exit of one of the partners before previously fixed date of function of an alliance.

8. Occurrence of conflict of interests of participants of the alliance concerning both obligations to cooperate within the limits of VSA and competitive actions (measures) of participants and competitors in some common for partners areas of activity. As partnering organizations can have several areas of activity, there is a likelihood of that that cooperation interests in one kind of it will contradict competitive interests of related kind of activity which is not the object of cooperation agreements within the frameworks of VSA.

The majority of companies of world technological leaders, including in mechanical engineering sphere, participate in several strategic alliances. Results of the research of

the National Venture Capital Association (NVCA), which was conducted in April and May, 2007, have shown: widespread strategies of venture capitalists in the world are strategic alliances which together with joint ventures are related to forms of external venture business. The analysis of innovative activity of the leading technological companies confirms a significant amount of the strategic alliances with young innovative firms created with their participation (table 16.2) [8].

As statistical data [123] indicate, the fastest growth rates of alliances are observed in the Asian-Pacific region. The largest number of alliances has been created in North America where unlike the Asian region one observes that alliances lose their positions and deals of M&A type become more popular.

Study of innovative activity of some industrial enterprises in Ukraine has shown that the domestic enterprises also choose the form of external venture, in particular of alliances as one of the most attractive forms of co-operation among companies in the field of R&D.

Example of a successful strategic alliance in mechanical engineering – the venture alliance of the companies manufacturing hybrid cars which include: venture enterprise "*Aptera Motors, Inc*", created in California (USA), which develops and manufactures vehicles "*Venture*", "*Venture Vehicles*" (innovative company – idea developer), "*Swift Engineering*" (design organization), "*Carver Engineering*" (licensor of the patented technology *DVC* – dynamic vehicle control), "*AMCI Testing*" (company - marketing adviser), "*AutoPacific Group*" (company, that analyzes and studies the automobile industry), "*WanxiangAmerica Corporation*" (company-supplier of spare parts and components), "*Boshart Engineering*" (vehicle testing company), "*California Motors*" (company, that develops and manufactures hybrid engines).

Thus, the external scheme of venture financing consists in the syndicated financing of projects by industrial corporations and financial institutions. The given scheme provides for either implementation of projects using the facilities of the existing enterprises – intellectual property developers or creation of new joint ventures for commercialization of intellectual property objects. By this scheme financial intermediaries in the form of independent venture funds are virtually not used. Means for implementation of projects enter either newly created or existing enterprises according to the share principle, at that the contribution of each of the participants of an external venture can occur not only in monetary, but also in other forms by giving relative services, executing separate stages of innovative venture projects and so on. Depending on the contribution of each of the participants their effects from implementation of venture projects are defined.

Table 16.2.

**Strategic alliances of the leading technological companies of the world
(2002 – 2006)**

Companies	Primary activity (industry)	Number of alliances	Companies	Primary activity (industry)	Number of alliances
<i>Microsoft</i>	Software	125	<i>Cisco Systems</i>	Telecommunications equipment	56
<i>Motorola</i>	Telecommunications equipment	105	<i>Dell</i>	Computer equipment	22
<i>Nokia</i>	Telecommunications equipment	65	<i>eBay</i>	Retail trade	26
<i>Nortel Networks</i>	Telecommunications equipment	30	<i>Ell Lilly</i>	Pharmaceutical	40
<i>Pfizer</i>	Pharmaceutical	59	<i>GlaxoSmithKline</i>	Pharmaceutical	74
<i>Philips</i>	Electronic	61	<i>Hewlett-Packard</i>	Computer equipment	145
<i>Siebel Systems</i>	Software	31	<i>IBM</i>	Computer equipment	168
<i>Toshiba</i>	Computer equipment	49	<i>Infineon Technologies</i>	Semiconductor	32
<i>ST Microelectronics</i>	Semiconductor	27	<i>Intel</i>	Semiconductor	66
<i>SUN Microsystems</i>	Computer equipment	81	<i>Merck</i>	Pharmaceutical	49

The external scheme of venture financing provides for creation of external ventures – complex integration and cooperation structures, formed on the basis of privity of contract among independent entrepreneurship subjects to combine financial, labor, information, material and other resources, for joint realization of separate stages of innovation projects in order to commercialize innovations. External ventures can be created as intercompany research institutes, venture alliances, research consortia and joint enterprises and so on.

Test questions and tasks

1. Explain the process of creation of the ventures by using the external scheme of venture financing.

2. In what modifications are the external ventures formed?
3. Define the essence of “external venture” concept.
4. What is the venture strategic alliance?
5. Name the kinds of alliances.
6. To what kinds of strategic alliances do venture strategic alliances belong?
7. Analyze both advantages and drawbacks for enterprises from participation in venture strategic alliances.
8. Reveal the content of the stages of formation of venture strategic alliances.
9. What place is taken by the strategy of formation of venture strategic alliances among widespread strategies of formation of the ventures by venture capitalists?
10. What attracts enterprises introducing innovations to take part in venture strategic alliances? Explain.

17. EVALUATION OF EFFICIENCY OF VENTURE FINANCING OF PROJECTS

17.1. Classification of venture activity efficiency indicators

For application of the system approach to estimation of efficiency of venture financing of the enterprises we will specify the term "*efficiency of venture activity*" are benefits which are received by subjects of venture activity, as well as a society, economy branches, the state from performance of such activity.

For the purpose of an economic substantiation of expediency of venture investment and estimation of levels of efficiency of cooperation of various venture entrepreneurship subjects one should know classification of indicators of efficiency of venture activity. Thereby, its signs are detected by:

- level of management at which they get efficiency indicators;
- environment of reception of efficiency indicators;
- indicators of efficiency of activity of certain kinds of the venture organizations;
- kinds of innovative transformations;
- indicators defining efficiency of participation of venture process subjects;
- level of definition of indicators of efficiency of venture activity;
- spheres of the received efficiency of the venture organization;
- interrelation degrees (influence increase) with other indicators of efficiency.

There are such kinds of indicators of venture activity efficiency:

1. Indicators – of macrolevel, mesolevel and microlevel.
2. Efficiency indicators – internal (of the activity of a separate venture enterprise), external (of the activity of other economic agents, society, state as a whole).
3. Efficiency indicators – of the internal ventures, "independent" ventures, external venture structures.
4. Efficiency due to – product, technological, resource, organizational and social innovations.
5. Indicators of efficiency for the inventor (venture entrepreneur):
 - enterprise (venture organization) as control object;
 - research establishments, institutes of higher education and their self-contained units participating directly in scientific researches, developments of products of venture introduction;
 - objects of venture innovation infrastructure;
 - investors of the enterprise (shareholders, including business angels, venture capital funds, venture capital firms);

- enterprises-strategic partners being co-investors of a venture enterprise;
- society (influence of venture activity on households, consumers of production of a venture enterprise, suppliers, organizations manufacturing substitute products and supplements of an innovative product);

- state (state structures and local governments).

6. Internal organization divisions. Hence, the level of:

- organization (venture enterprise);
- industry, where a venture enterprise operates;
- other industries to which innovative achievements in the industry of a venture enterprise extend;

- regional level of the country in which a venture enterprise carries out its activity;

- national (state);

- inter-regional (level of the certain group of countries);

- international (global scale).

7. Indicators – of scientific and technical, economic, marketing, production and sale (resource), social and environmental efficiency.

8. One-time efficiency, multiplication efficiency. Generalization of materials allowed drawing a conclusion that indicators of scientific and technical efficiency of an enterprise include:

- quantity of the advanced product concepts, developed industrial prototypes, patented articles introduced on their basis; quantity of improved and introduced innovation processes, technologies, products; percent of innovative products successfully introduced into the market;

- quality of patents and quantity of publications on the conducted researches etc. [149].

Indicators of cost-effectiveness of a venture enterprise are:

- percent of proceeds from sale of licences in the general structure of received proceeds;

- percent of proceeds from engineering and technological services in the general structure of received proceeds;

- increase of production efficiency as a result of introduction of results of R&D;

- decrease in volumes of necessary investments in fixed capital thanks to R&D;

- production price reduction at its invariable or improved quality;

- increase in volumes of production, resource saving if resource-saving technologies are used;

- changes in shareholder and share value of a company, changes in prices of shares;

- changes in value of intangible company assets.

Indicators of marketing, production and sale (resource) efficiency include:

- share of the market of new products and its expansion;
- percent of expansion of nomenclature and range of products;
- percent of new released products in structure of production volumes;
- share of sale of innovative products in structure of sales volumes;
- time of achievement of break-even points for innovative production;
- ratio between R&D costs and incomes from products received as a result of R&D;
- sales volumes of the products, which are in the market for less than five years;
- changes in perception of products of a company by consumers, employees, shareholders and society as a whole;
- increase in quantity of loyal clients to production of a company, changes in acknowledgement of value of a company by consumers, increase in image of a company etc.

Indicators of social efficiency include quantity of radically new and improved production in the market; time of market entry; improvement of quality, reduction in production price and consumption prices of new production; improvement of management processes; increase in management efficiency, social working conditions and motivation of employees of an enterprise etc. Usually it is difficult to define a social effect because of occurrence of many accompanying effects which are measured by both quantitative and qualitative indicators [3, pp. 89-100].

On the basis of study of materials indicators of environmental efficiency include: reduction in expenses for manufacture of products, increase in energy and resource saving through improved functional characteristics of innovative products and other indicators with the help of which they consider influence of innovations on environment.

It is important to consider indicators of efficiency which is got by participants (subjects) of venture process, namely: inventor (venture entrepreneur), enterprise (venture organization) as control object; investors of an enterprise (shareholders, including business angels, venture capital funds, venture capital firms), enterprises-strategic partners – co-investors of a venture enterprise; society; state as represented by state authorities and local governments [77, pp. 87-92]. Let us notice, that each of the interested parties in venture investment has own motives and goals of investment or cooperation with a venture organization. Therefore for one or another subject of venture investment there are priority indicators by which it is possible to define, whether they have reached their purposes and efficiency from cooperation with venture subjects.

Considering a variety of participants of venture investment, their importance, role and contribution to creation and management of venture activity, they are used to consider this sign first of all.

The venture entrepreneur, inventor, when starting one's own business and trying to realize an innovative idea through creation of "independent" venture, can use the following indicators of venture activity efficiency:

- satisfaction of own needs concerning getting the desirable result (commercialization of own invention, acquisition of patents on these inventions; increase in own self-appraisal, respect and self-expression through awareness of one's role and significance in achievement of scientific and technical tasks; advanced training, acquisition of new knowledge, habits and skills as consequence of getting an appointment in a venture enterprise);

- achievement of enterprise success through reception of certain economic indicators: increase in sales volumes, those of income; winning share of the market by a venture enterprise and so on;

- return of the means put in the enterprise (investments), material welfare achievement, etc.

The enterprise ("independent" venture organization) – control object for evaluation of efficiency of participation in venture activity – can use the indicators:

- creation and rollout of innovative products;
- level and scale of scientific and technical novelty of production, degree of satisfaction of consumers' needs, expansion of production range;
- formation of new or expansion of existing outlets;
- winning leading positions in the market where products are sold;
- increase in greening of production and quality of existing products, decrease in resource intensity of produce and expenses for its manufacture.

For estimation of the effectiveness of participation in venture activity the enterprises having "internal" venture divisions in their structure, use indicators dealing with:

- increase in competitiveness of the company through expansion of range of production in principal kinds of activity, entry into new outlets, development of products in new fields;
- replacement of outdated technologies, decrease in resource intensity of produce and expenses for its manufacture;
- growth of export of production, sales volumes and so on;
- improvement of working conditions, management efficiency increase.

Universities and other institutes of higher education participating in the venture entrepreneurship, also define their own indicators that show efficiency of their involvement in such activity. These indicators include:

- level and quality of scientific researches, quantity and quality of scientific and technical developments, volumes of transfer of university technologies;
- quantity of registered inventions and sold licences for use of the inventions;
- volumes of commercialization of university knowledge and technologies, proceeds from sale of university licenses;
- number of venture enterprises of spin-off and spin-out type, created by employees and students of institutes of higher education in which the latter have shares of ownership;
- institutes of higher education being a part of scientific and technical clusters, establishment of close mutually advantageous ties with the business area, formation of external venture structures, increase in level and quality of training period of students;
- diversification of funding sources of activity of institutes of higher education, creation of internal venture capital funds and structures for technology transfer to support their venture spin-offs and spin-outs;
- increase in proceeds from sale of licences and venture entrepreneurship;
- growth of amount of financing of scientific researches by means of successful exits of institutes of higher education [178; 179].

Depending on types of investors, their motives, goals and, as a result, contribution to venture enterprise development it is expedient to distinguish indicators of efficiency of venture activity from cooperation (investment, management) for various investors.

Indicators of efficiency of venture investment for individual investors (business angels):

- economic: index of investments profitability, investment efficiency ratio, invested funds return (ROI) period and so forth;
- achievement of own purposes of investment: searching and getting of a corresponding executive position in the invested enterprise, satisfaction of highest needs concerning belonging and social interaction, expansion of own business or starting new kinds of activity;
- deriving pleasure from doing what one likes to do (hobby – to risk one's funds for the sake of getting remuneration in the future) and so forth.

Venture capital funds, venture capital firms, depending on the purpose of creation, the state's shares in property or absence thereof, can use various indicators of definition

of efficiency of investment in venture enterprises, but up to us the main are the following:

- economic: index of investments profitability, investment efficiency ratio, invested funds return (ROI) period et al.;
- growth of the invested organization value, of investment certificates (shares) of unit investment funds;
- exiting the invested enterprise and reception of profit from increment in the company value.

For corporate venture funds as well as business angels' funds, additional indicators from participation in the venture activity can be creation of new or expansion of already existing outlets, winning leading positions in the market where production is sold and so on.

To evaluate the efficiency of participation in the venture activity for organizations of venture innovation infrastructure they use:

- rate of commission for rendering of services to venture organizations (profit);
- gaining a positive experience, image, trust and reputation in the services market;
- expansion of range of services for clients;
- increase in number of clients;
- entry into the international market of services and so forth.

The enterprises and strategic partners – co-investors of a certain venture enterprise – can evaluate the efficiency of participation in the venture activity with the aid of:

- economic indicators: index of investment profitability, investment efficiency ratio, invested funds return (ROI) period et al.;
- indicators of growth of the invested organization value and successfulness of venture business exit;
- creation and rollout of innovative products;
- level and scales of scientific and technical novelty of production, degree of satisfaction of consumers' needs, expansion of range of one's own production;
- creation of new or improvement of already existing outlets, access to primary products and materials, common sales channels;
- winning leading positions in the market where products are sold;
- indicators from the general business, economy of scale and experience of management, synergy from collaboration etc.;
- indicators of influence on related branches of industry.

Venture entrepreneurship will influence the society through:

- improvement of quality of life of population (level of incomes, quality of goods, level of satisfaction of needs);
- expansion of range of services, reduction in production price and prices of consumption of innovative production;
- saving of resources for production consumers, decrease in energy- and resource intensity of produce, increase in greening of manufacture of new products (wasteless production, reduction in harmful emissions and impact on the environment);
- increase in environmental safety of a region;
- job protection and creation, improvement of working conditions, health and life expectancy by application of innovative technologies in public health and medicine area;
- unemployment reduction and decrease in budgetary expenditures for payments to the unemployed.

The venture entrepreneurship impacts on the state, regions (state structures and local governments) through:

- satisfaction of needs of the population in goods and services;
- improvement in quality of production, competitiveness of enterprises, industries, regions and the state;
- growth of export of science-intensive production;
- increment in sales volumes of science-intensive production;
- increment in tax allocations, decrease in expenses for job creation, increment in manufactured production per one employee;
- decrease in power intensity of production, introduction of green production methods;
- growth of the national income, increase in gross domestic product and so on.

Let us thoroughly study the indicators of cost efficiency of venture activity. For the purpose of definition of indicators of cost efficiency of venture financing it is necessary to calculate future benefits, which will be received by venture investment subjects, by making use of the data (Topic 14, table 14.2).

By the sign of spheres of reception of efficiency it is possible to define the cost efficiency of venture financing by means of the following indicators:

- base rate of growth of venture company value at N rounds of financing;
- base rate of growth of the share price of venture company at N rounds of financing;
- absolute base and chain increments of the venture company value at N rounds of financing;

- absolute base and chain increments of the share prices of venture company at N rounds of financing;
- base and chain increment rates of the venture company value at N rounds of financing;
- base and chain increment rates of the share prices of venture company at N rounds of financing;
- coefficients of return on capital (ROC) – ratio of annual change of the company value to the amount of investments during the period between two rounds of venture financing [174] which can be defined by using the formula

$$ROC^{N-(N-1)} = \frac{\Delta VEV^{N-(N-1)}}{Inv^{N-1}}, \quad (17.1)$$

where $ROC^{N-(N-1)}$ – return on capital of the venture company at N round of financing; $\Delta VEV^{N-(N-1)}$ – absolute increment in venture company value at N round, US\$; Inv^{N-1} – amount of investments, put at N round of venture financing, US\$;

- coefficients of return on equity (ROE) – ratio of the net profit, received by the venture company, to the average equity value for the certain period of time:

$$ROE_i = \frac{NCF_i}{\overline{AV}_i}, \quad (17.2)$$

where ROE_i – coefficient of return on equity during i period of venture company operation; NCF_i – net profit, received by the venture company during i period, US\$; \overline{AV}_i – average equity value for i period, during which profit has been received, US\$;

- coefficients of return on investment (ROI) and volumes of rewards (gains) received by investors and founders of a venture enterprise (VI - "Venture Income");
- founders preserve their share, maximization of shares in property of founders at minimization of the shares, passed into the ownership of venture capitalists.

Essential distinctions in approaches to formation of capital structure of the venture enterprise, insufficient study of these approaches in the literature cause the necessity for formation of methodological attitudes regarding cost-effectiveness of venture financing of projects for investors and founders of the venture enterprise by three approaches. The algorithm of estimation of the venture financing of projects is given in fig. 17.1.

Calculation of a market value of the venture company less debt instruments at dissolution (exit of investors) demands the account of distribution among investors by shares and kind of stocks which they hold. The source analysis allowed to draw a conclusion that according to the first approach to the venture financing, distribution of

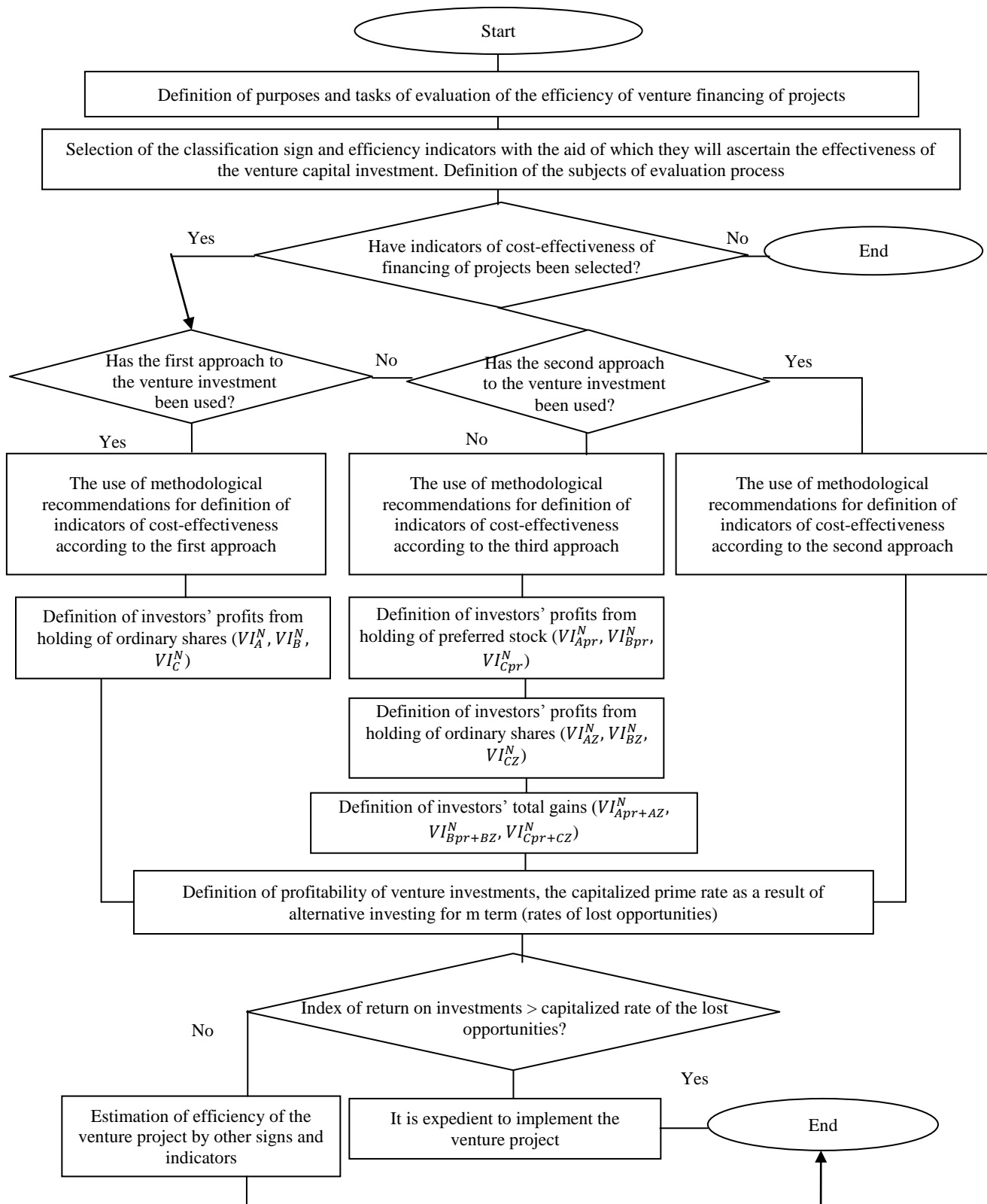


Fig. 17.1. The algorithm of estimation of the efficiency of venture financing of projects

the shareholder value among investors of the venture company occurs by shares of common stock which all investors hold, D_A^N, D_B^N, D_C^N , – where shares of investors of the first, second and third rounds respectively – at N-round of venture financing.

The income received by investors of three rounds and founders will be defined by using the formulas:

$$VI_0^N = AV^N \times D_0^N, \quad (17.3)$$

$$VI_A^N = AV^N \times D_A^N, \quad (17.4)$$

$$VI_B^N = AV^N \times D_B^N, \quad (17.5)$$

$$VI_C^N = AV^N \times D_C^N, \quad (17.6)$$

where $VI_0^N, VI_A^N, VI_B^N, VI_C^N$ – incomes of founders, the venture investor (capitalist) of the first round of financing, the venture investor (capitalist) of the second round of financing, the venture investor (capitalist) of the third round of financing of the venture enterprise respectively, paid if one exits after the completion of N-round of financing, US\$; AV^N – shareholder value of the venture company upon completion of N-round of financing, US\$; D_0^N – ownership ratio of founders of the venture company, belonging to them after the completion of N-round of financing.

Coefficients of return on investments by the first approach to venture financing for investors are defined by division of the received compensation by the amount of investments put by the certain investor in the venture enterprise.

17.2. Peculiarities of evaluation of venture financing cost-effectiveness

Methodological recommendations for calculation of investors' future incomes and coefficients of return of venture investments are given in fig. 17.2.

Distribution of the shareholder value among investors of the venture company according to the second approach of venture financing has its special features.

1. When one uses the preferred stock without the right to take part in distribution of funds, left after payment of n -fold liquidation preference (nonparticipating preferred);

The income received by investors of three rounds and founders will be defined on the basis of priority payment of n -fold liquidation preference to holders of the preferred stock by using the formulas:

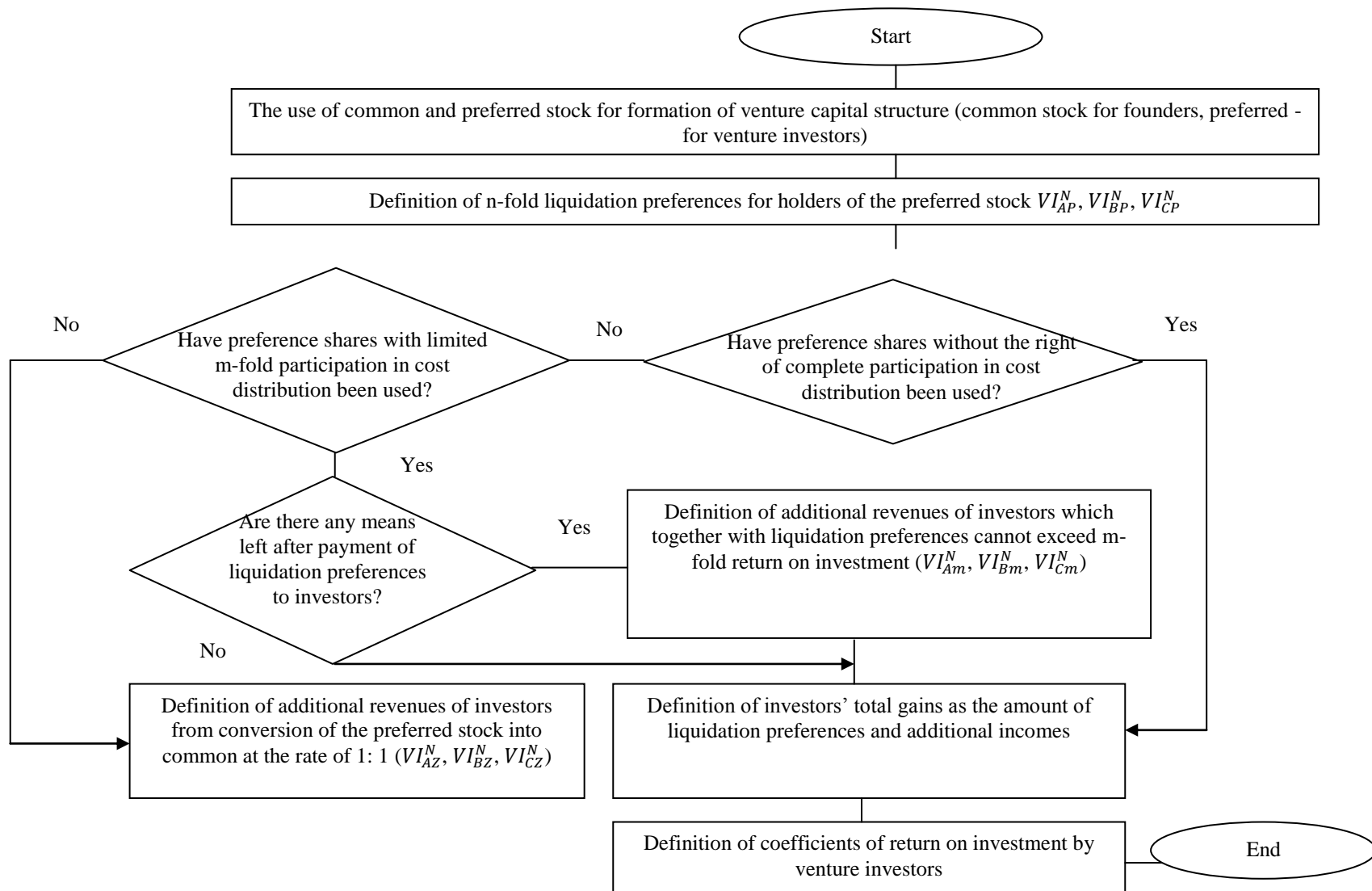


Fig. 17.2. The algorithm of calculation of investors' incomes and coefficients of return on investment if the second approach to formation of structure of the venture capital of enterprise is used

$$VI_{AP}^N = n \times Inv^1, \quad (17.7)$$

$$VI_{BP}^N = n \times Inv^2, \quad (17.8)$$

$$VI_{CP}^N = n \times Inv^3, \quad (17.9)$$

The income received by founders we define by:

$$VI_0^N = (AV^N - (VI_A^N + VI_B^N + VI_C^N)) \times D_0^N, \quad (17.10)$$

where VI_{AP}^N - income of the venture investor (capitalist) of the first round of financing from holding Series A Preferred Stock – liquidation preference, is paid after the completion of N-round of financing, US\$; VI_{BP}^N - income of the venture investor (capitalist) of the second round of financing from holding Series B Preferred Stock - liquidation preference, is paid after the completion of N-round of financing, US\$; VI_{CP}^N - income of the venture investor (capitalist) of the third round of financing from holding Series C Preferred Stock - liquidation preference, paid after the completion of N-round of financing, US\$; AV^N – shareholder value of the venture company after completion of N-round of financing, US\$; D_0^N – ownership ratio of founders of the venture company, as holding of the common stock, belonging to them after the completion of N-round of financing; n - multiplicity of liquidation preference

2. When the preferred stock is used which fully participate in distribution of funds, left after payment of n-fold liquidation preference (fully participating preferred).

The size of liquidation preferences are defined by using the formulas 17.7-17.9. It is proposed to define revenues from the preferred stock at its conversion into the common as follows:

$$VI_{AZ}^N = (AV^N - (VI_A^N + VI_B^N + VI_C^N)) \times D_A^N, \quad (17.11)$$

$$VI_{BZ}^N = (AV^N - (VI_A^N + VI_B^N + VI_C^N)) \times D_B^N, \quad (17.12)$$

$$VI_{CZ}^N = (AV^N - (VI_A^N + VI_B^N + VI_C^N)) \times D_C^N, \quad (17.13)$$

The

income received by founders we define by the aforementioned formula 17.10.

where VI_{AZ}^N - income of investors of the first round of venture financing from preferred stock (share in property of the venture company - D_A^N), converted into common stock at conversion price of 1:1, US\$; VI_{BZ}^N - income of investors of the second round of venture financing from preferred stock (share in property of the venture company - D_B^N), converted into common stock at conversion price of 1:1, US\$; VI_{CZ}^N - income of investors of the third round of venture financing from preferred stock (share in property of the venture company - D_C^N), converted into common stock at conversion price of 1:1,

US\$; VI_0^N - income of founders of the enterprise from common stock (share in property of the venture company - D_0^N), US\$

Total revenues of venture investors at their exit will make up the amount of liquidation preferences and profits from preferred stock in the course of their conversion into common stock at conversion price:

$$VI_{A+AZ}^N = VI_A^N + VI_{AZ}^N, \quad (17.14)$$

$$VI_{B+BZ}^N = VI_B^N + VI_{BZ}^N, \quad (17.15)$$

$$VI_{C+CZ}^N = VI_C^N + VI_{CZ}^N, \quad (17.16)$$

3. When preferred stock with the limited n-fold participation (participated preferred subject to a cap) is used, the size of liquidation preference of holders of preferred stock investors of three rounds of venture financing will be defined similarly by using the formulas 17.7-17.9. see the book for correction

Incomes of investors with possibility of m-fold participation in distribution of the means, left after payments of liquidation preferences, are calculated as:

$$\lim_{k \rightarrow m-n} k \times Inv^1 + k \times Inv^2 + k \times Inv^3 \geq (AV^N - (VI_A^N + VI_B^N + VI_C^N)), \quad (17.17)$$

provided that $n \leq m, k \rightarrow m - n$.

Depending on the amount of funds, left after payments of liquidation preferences $(AV^N - (VI_A^N + VI_B^N + VI_C^N))$, investors, in proportion to investments made by them, can receive additional revenue: it is along with liquidation preference can not exceed m-fold return on investment (Inv):

$$VI_{Am}^N = k \times Inv^1, \quad (17.18)$$

$$VI_{Bm}^N = k \times Inv^2, \quad (17.19)$$

$$VI_{Cm}^N = k \times Inv^3, \quad (17.20)$$

$$VI_0^N = (AV^N - (VI_A^N + VI_B^N + VI_C^N) - (VI_{Am}^N + VI_{Bm}^N + VI_{Cm}^N)) \times D_0^N, \quad (17.21)$$

where VI_{Am}^N - income of investors of the first round of venture financing from preferred stock with limited m -fold participation, US\$; VI_{Bm}^N - income of investors of the second round of venture financing from preferred stock with limited m -fold participation, US\$; VI_{Cm}^N - income of investors of the third round of venture financing from preferred stock with limited m -fold participation, US\$; VI_0^N - income

of enterprise founders after payments of liquidation preferences and distribution of the remaining means up to “cap” amount (m -fold return on investment to investors of three rounds of financing), US\$.

Total revenues of venture investors at their exit will make up the amount of liquidation preferences and profits from preferred stock with limited m -fold participation

$$VI_{A+Am}^N = VI_A^N + VI_{Am}^N, \quad (17.22)$$

$$VI_{B+Bm}^N = VI_B^N + VI_{Bm}^N, \quad (17.23)$$

$$VI_{C+Cm}^N = VI_C^N + VI_{Cm}^N, \quad (17.24)$$

According to the third approach common and nonconvertible preferred stock are sold to investors in a combination at certain ratio: 90% / 10% or 80% / 20% (P_r / Z):

$$P_{rA} + Z_A = 100\%, \quad (17.25)$$

$$P_{rB} + Z_B = 100\%, \quad (17.26)$$

$$P_{rC} + Z_C = 100\%, \quad (17.27)$$

A peculiar liquidation preference of investors – holders of preferred stock, is priority return of the amount of investments in preferred stock of the venture enterprise:

$$VI_{Apr}^N = P_{rA} \times Inv^1, \quad (17.28)$$

$$VI_{Bpr}^N = P_{rB} \times Inv^2, \quad (17.29)$$

$$VI_{Cpr}^N = P_{rC} \times Inv^3, \quad (17.30)$$

Investors’ profits from holding of ordinary shares are calculated by using the formulas 17.10 and 17.11-17.13.

where VI_A^N - liquidation preference of holders of preferred stock of the first round of venture financing of P_{rA} % of the amount of made investments (Inv^1), US\$; VI_B^N - liquidation preference of holders of preferred stock of the second round of venture financing of P_{rB} % of the amount of made investments (Inv^2), US\$; VI_C^N - liquidation preference of holders of preferred stock of the third round of venture financing of P_{rC} % of the amount of made investments (Inv^3), US\$; VI_{AZ}^N - investors’ income of the first round of venture financing from holding D_A^N % of common stock, purchased for Z_A % of means invested in venture capital firm (Inv^1), US\$; VI_{BZ}^N - investors’ income of the second round of venture

financing from holding D_B^N % of common stock, purchased for Z_B % of means invested in venture capital firm (Inv^2), US\$; VI_{CZ}^N - investors' income of the third round of venture financing from holding D_C^N % of common stock, purchased for Z_C % of means invested in venture capital firm (Inv^3), US\$; VI_0^N - income of enterprise founders after payment of liquidation preferences holders of preferred stock from holding D_0^N % of common stock of the venture enterprise, US\$; D_A^N, D_B^N, D_C^N - stakes of venture capital firm in common stock, belonging to the investor of the first, second and third rounds of venture financing respectively; D_0^N - stake (in common stock) of venture firm founders, which belong to them after completion of N -round of financing.

Total revenues of venture investors during the course of their exit will make up the amount of liquidation preferences and profits from common stock:

$$VI_{A+AZ}^N = VI_{Apr}^N + VI_{AZ}^N, \quad (17.31)$$

$$VI_{B+BZ}^N = VI_{Bpr}^N + VI_{BZ}^N, \quad (17.32)$$

$$VI_{C+CZ}^N = VI_{Cpr}^N + VI_{CZ}^N, \quad (17.33)$$

The share of founders of the enterprise decreases if there are several rounds of venture financing. Therefore, depending on their quantity, the shares, transferred to the possession of venture capitalists, grow. To minimize possible losses of ownership in the venture enterprise its founders can by way of an effective use of means of the previous rounds in order to avoid the subsequent.

If there are three rounds of venture financing the distribution of property of the venture enterprise occurs as follows. Until the first round of financing the founders preserve D^0 – share in property of the venture enterprise (it is held by founders of such enterprise). At the first round the share in property of the founders decreases to the amount of a transferred share to the investor of the first round of venture financing – D_A ($D_0^1 = 1 - D_A$). At the second round of venture financing to avoid equity (ownership) dilution of the venture enterprise which the investor of the first round possesses, s/he is transferred some additional quantity of shares for preservation of the share D_A . Along with previous stock, his share makes D_A^2 . The investor of the second round is transferred a share in property of the venture enterprise of D_B . The share of founders at the end of the second round of financing is defined by using the formula

$$D_0^2 = 1 - (D_B - D_A^2), \quad (17.34)$$

At the third round of venture financing to avoid equity (ownership) dilution of the venture enterprise which the investors of the first and second rounds possess, they are

transferred some additional quantity of shares for preservation of their share D_A and D_B respectively. Along with previous stock, their shares make D_A^2 and D_B^3 respectively. The investor of the third round is transferred a share in property of the venture enterprise of D_C . The share of founders at the end of the third round of financing will be defined by using the formula

$$D_0^2 = 1 - (D_C + D_B^3 + D_A^3), \quad (17.35)$$

The final decision about expediency of financing of the project is made depending on the kind of investors. The decision according to which one will ensure the maximum increment in shares of ownership of investors and achievement of n-fold return on investment during a certain term of investment by exiting the invested enterprise is economically grounded.

Venture capitalists, by putting not their own but attracted means, strongly adhere to this criterion as they have obligations to investors. When term of investments (term of venture capital fund creation) expires they have to exit venture enterprises to discharge their obligations. Therefore such investors are interested in increment in value of shares in property during the period defined beforehand.

So, we have come to conclusion, that the criterion of decision-making on expediency of implementation of projects by venture investors is comparison of gross profit of the venture investor received from exiting the invested enterprise, and gross profit which can be received from an alternative investment in other objects; or comparison of the index of profitability of investments for the concrete venture investor with the capitalized interest rate from an alternative investment for m term [3].

$$\left(\frac{VI^N}{(1+r)^m} \right) - \left(\sum_{i=1}^n In\vartheta_i^N \cdot (1 + r \cdot n) \right) > \sum_{i=1}^m In\vartheta_i^N \cdot \left(\frac{R}{100} \right) \cdot m, \quad (17.36)$$

$$\left(\frac{VI^N}{(1+r)^m} \right) - \left(\sum_{i=1}^n In\vartheta_i^N \cdot (1 + r \cdot n) \right) > \sum_{i=1}^m \left\{ In\vartheta_i^N \cdot \left[\left(1 + \frac{R}{100} \right)^m - 1 \right] \right\}, \quad (17.37)$$

$$\left(\frac{VI^N}{(1+r)^m} \right) / \left(\sum_{i=1}^n In\vartheta_i^N \cdot (1 + r)^n \right) > \left(1 + \frac{R}{100} \right)^m, \quad (17.38)$$

where ... - total income of the venture investor (capitalist) of N-round of financing from holding common and/or preferred stock, US\$; ... - volume of the investments, made by the investor of N-round of venture financing, US\$; ... - discount factor (internal rate of return of the venture project); n - number of periods during which investments were made, years; m - number of periods before the moment when the venture investor (capitalist) of the first round of financing exits the invested

enterprise (usually it makes 5-7), years; R - rate of lost opportunities, %. One proposes to define it depending on inclination of investors to an alternative investment of means in other objects: property (real estate, antiques etc.), deposit programs, portfolio securities, bank metals et al. The lost opportunity rate of venture investors is calculated as weighted average cost of venture capital.

The weighted average cost of venture capital (WACVC) is a minimum rate of return that would be expected from an alternative investment by venture investors and creditors of their means. WACVC is calculated as mean value of costs of separate parts of capital which would be subject to an alternative investment by investors and creditors for the period of venture investment of the innovative enterprise:

$$WACVC_i^N = \omega_1^{iN} \cdot K_1^{iN} + \omega_2^{iN} \cdot K_2^{iN} + \dots + \omega_l^{iN} \cdot K_l^{iN},$$

$$\sum_{l=1}^p \omega_l^{iN} = 1, \quad (17.39)$$

where $WACVC_i^N$ – weighted average cost of venture capital for investor i of N round of financing, %; ...- share in structure of the venture capital of i investor of N round of financing which could be used for l kind of an alternative investment of means; ... - profitability of l kind of an alternative investment of means of i investor of N round of financing, %; p – quantity of alternative investments of means (venture capital).

The profit of venture investors results from increment in venture organization value. The difference between invested financial resources Inv_i^N and cost of sale of shares in property of the venture enterprise makes investors' profit.

Let us consider the example of calculation of indicators of growth and future benefits of venture investors of the venture capital firm.

Example (see in Topic 14). Let the owners of GROSSI Company, having invested US\$2 mln, hold 1.6 mln shares. The venture capital firm "LIV Innovations" for the purpose of adjustment and launch of mass production of electric cars is willing to invest in the company US\$8 mln in exchange for 49% of capital of GROSSI Company. In table 17.1 the alteration of values of indicators of GROSSI Company after the first round of venture financing is shown.

The calculation of future value of the venture enterprise GROSSI showed a significant growth of the company value. If to assume, that the company does not attract venture investments any more, i.e. there is no equity dilution which venture investors possess, the price will increase up to US\$ 17.53 per one share.

Table 17.1.

**Indicators of growth of GROSSI Company if it uses
venture capital**

Indicators	Value of indicators
Preinvestment company value, mln US\$	8.33
Post-investment company value, mln US\$	16.33
Quantity of shares which it is necessary to transfer to venture investors, mln pcs	1.54
Total amount of shares issued by the company in the end of the first round of venture financing, mln pcs	3.14
Price of company shares before the first round of venture financing, US\$	1.25
Price of company shares after the first round of venture financing, US\$	5.2
Growth coefficient of the share price at the first round of financing	3.95
Growth coefficient of the company value at the first round of financing	4.16

The results of calculation of venture investors' revenues at different approaches of venture investment is given in table 17.2.

Table 17.2.

**The use of different approaches to formation of structure
of venture capital of GROSSI Company**

Venture investors				Founders (managers)		
Liquidation preferences	Revenue from holding of ordinary shares	Total gain	ROI	Revenue from holding of ordinary shares	Total gain	ROI
First approach of venture investment						
-	26 996 200	26 996 200	3.37	28 048 000	28 048 000	14.02
Second approach of venture investment						
24 000 000	-	24 000 000	3.0	31 054 593.27	31 054 593.27	15.53
24 000 000	15 216 750.7	39 216 750.7	4.9	15 837 842.57	15 837 842.57	7.92
24 000 000	12 000 000	36 000 000	4.5	19 054 593.27	19 054 593.27	9.53
Third approach of venture investment						
6 400 000	23 840 750.7	30 240 750.7	3.78	24 813 842.57	24 813 842.57	12.41

The first approach assumes the use of only common stock for all categories of investors. If the second approach to capital structure formation of the venture enterprise GROSSI is used then a triple liquidation preference is established. If it is possible to convert preferred stock into common such preference is equal to 3, and the conversion

price will be established 1:1. Full participation of venture investors in distribution of venture enterprise value should not exceed more than 4.5 times the amount of means invested by them. According to the third approach of venture investment distribution of the venture capital will be at the ratio 80/20: for 80% of investment resources the investor receives preferred stock, and for 20% of the amount invested – 49% of ordinary shares.

Having compared the results received from the use of three approaches to venture investment, it is possible to draw a conclusion, that the least incomes venture investors should expect at the second approach at payment of only the liquidation preference (ROI = 3.0), the largest income is stipulated at the second approach in case of conversion of preferred stock into ordinary shares (ROI = 4.9). For founders and managers of GROSSI Company the maximum income will be ensured by the second approach when only liquidation preference is paid to investors (ROI = 14.02), and the minimum income – the second in case of conversion of preferred stock into ordinary shares (ROI = 7.92).

The first approach and two variants of the second can promote formation of conflicts of interests among investors and the founders already at the stage of attraction of venture investments. Application of the cap difference for payments to venture investors and of the third approach will promote formation of trade-off decision to ensure benefits from exit for either participating parties of venture financing.

Definition of the future market value of venture enterprises and revenues of venture investors by means of sequence of stages of financial provision and implementation of venture projects of enterprises will promote making reasonable decisions when planning venture activity, selection of approaches to venture capital structure formation.

Thus, the efficiency of venture activity – benefits which are received by subjects of venture activity, a society, economy branches, the state from performance of such activity. They distinguish the following classification signs of indicators of venture activity efficiency: by management level at which efficiency indicators are got; by environment of reception of efficiency indicators; by indicators of efficiency of activity of certain kinds of venture organizations; by kinds of innovative transformations, by the indicators defining efficiency of participation venture process subjects; by level of definition of indicators of venture activity efficiency; by areas of received efficiency of venture organization; by interrelation degree (influence increase) with other indicators of efficiency etc.

The cost-effectiveness of venture financing is defined with the aid of base rate of growth of venture company value at certain quantity of rounds of financing; base rate of growth of the share price of the venture company at certain quantity of rounds of

financing; absolute base and chain increment in venture company value at certain quantity of rounds of financing; absolute base and chain increment in the share price of venture company value at certain quantity of rounds of financing; absolute base and chain increment rates of venture company value at certain quantity of rounds of financing; absolute base and chain increment rates of the share prices of venture company value at different quantity of rounds of financing; return on capital (ROC); return on equity (ROE); return on investment (ROI) and volumes of rewards (revenues) received by investors and the founders of venture enterprise; preservation of their share by founders, maximization of shares in property of the founders at minimization of the shares, transferred to the ownership of venture capitalists etc. While working out of the decision about expediency of investment venture capitalists use not only forecasted indicators of cost-effectiveness of venture activity, but also use criterion of decision-making about expediency of projects execution.

This criterion consists in comparison of the gross revenue of venture investor received from invested enterprise exit, and the gross profit which can be received from an alternative investment of means in other objects; or in comparison of the index of return on venture investments for a concrete venture investor with the capitalized interest rate from an alternative investment of means for the specified period (lost opportunity rate).

Test questions and tasks

1. Reveal the essence of concepts of both efficiency and cost-effectiveness of venture activity.
2. With the help of what indicators do they define cost-effectiveness of venture activity?
3. Name the classification signs and kinds of indicators of venture activity efficiency.
4. By what criterion do venture capitalists define the expediency of venture investment of projects?
5. What is the lost opportunity rate? How is it calculated?
6. How many approaches to formation of venture capital structure do you know?
7. How to calculate venture investors' revenues at different approaches to venture investment?

8. Analyze the indicators which are used by various venture entrepreneurship subjects for estimation of venture activity efficiency.

9. How are coefficients of return on capital (ROC) and that of return on equity (ROE) calculated?

10. Reveal the economic essence of return on investment (ROI) coefficient. What is shown by this indicator?

18. MAIN TENDENCIES OF VENTURE BUSINESS DEVELOPMENT IN THE WORLD

18.1. State of venture capital markets development under conditions of globalization

Considering that for economy of the post-Soviet countries ventures are rather new kind of entrepreneurship, there is the need to study and generalize the best world experience of management of venture enterprises of economically developed countries. We have tried to reveal in this topic world tendencies of development of venture capital markets, role and significance of venture investment for enterprises in the world's leading countries.

Difficulty of research of venture entrepreneurship development in the post-Soviet countries because of its weak development causes the necessity of research of venture investment development in the countries – world leaders in the use of venture capital that is in countries of Western Europe, Great Britain and the USA. In the given section the statistical data of the international venture capital associations, in particular the National Venture Capital Association (NVCA, USA), the European Private Equity & Venture Capital Association (EVCA) and the British Private Equity & Venture Capital Association (BVCA, UK) are used.

The results of research conducted by the National Venture Capital Association (NVCA) in April and May, 2007 [180] deserve to be studied. 528 respondents – venture capitalists living in various geographical regions have been questioned. According to the received data, in the next 5 years of 54% of investors from the USA and 54% of venture capitalists from other countries plan to invest means in venture enterprises outside of their countries. The main strategies, which are used by venture capitalists in the course of investment of funds in innovative enterprises, are the following (fig. 18.1):

1. Creation of strategic alliances with foreign enterprises.
2. Creation of joint investments with local investors abroad.
3. Merger of innovative enterprises in their own country.
4. Formation of partnerships abroad.
5. Investment in R&D in their own country with transfer of production abroad.

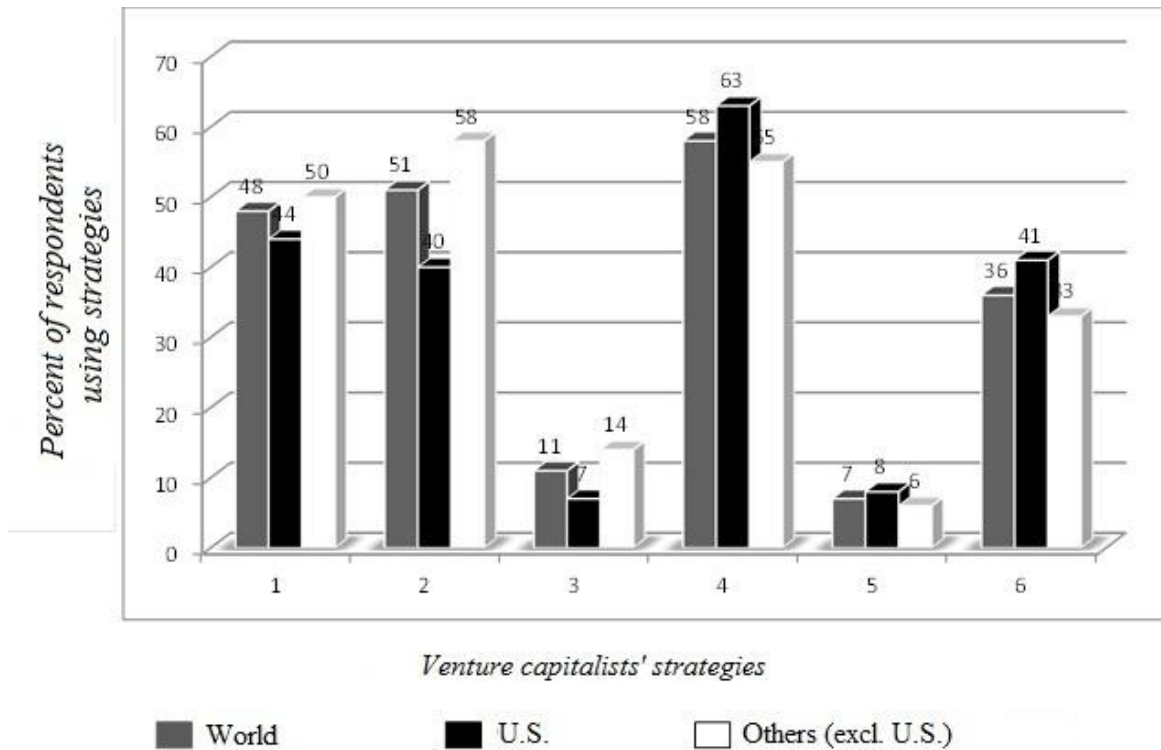


Fig. 18.1 Venture investment strategies by regional location of venture capitalists

6. Investment in foreign enterprises with performance of certain operations outside its limits, outsourcing.

The ordinal number in fig. 18.1 corresponds to that of strategy. The majority of respondents chose several strategies (several answers).

China and India are usually attractive countries for direct foreign investments of venture capitalists from the USA. In these countries on the average venture capitalists strike only one or two deals regarding venture financing of enterprises (fig. 18.2) [180].

The post-Soviet countries were mentioned among the most attractive territories for venture investments for 1% of venture capitalists of the countries (table 18.1). According to the statistical data the majority of companies with a capital of over US\$1 bln plan to put their means in foreign innovative enterprises (fig. 18.3) [180].

The basic motives of making foreign venture investments, according to the respondents, are: quality of innovation projects, skilled management of receiving enterprises, high entrepreneurship culture, diversification of industrial and geographical risks, access to foreign outlets, low costs of operation of business, high competition in the local market (fig. 18.4) [180].

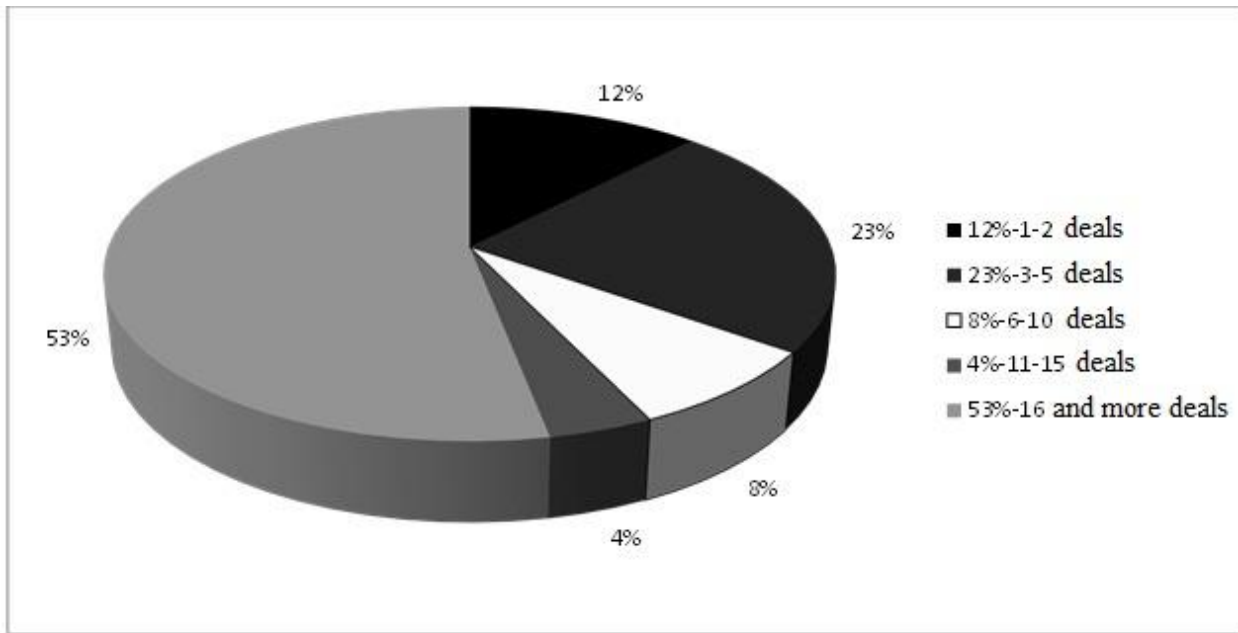


Fig. 18.2. Distribution of quantity of deals one capitalists strikes on average

Table 18.1.

Distribution of venture investments according to the appeal for European venture capitalists

Country	%
Countries of Central and Eastern Europe	23
Austria, Germany, Liechtenstein, Switzerland	19
USA	17
Countries of northern Europe	12
China	9
France, Italy, Monaco, Portugal, Spain	5
Great Britain, Ireland (Eire)	3
Benelux countries	3
Countries of the former socialist camp	1
Countries of Asia (others)	4
Other countries of the world	4

One more survey, conducted by the National Venture Capital Association (NVCA) in 2009, reveals the basic tendencies of development of the venture capital markets under conditions of globalisation [162]. So, during the survey 725 respondents have been interviewed – venture capitalists who live in different geographical regions and dispose of assets of venture funds and of venture capital firms from US\$100 mln till

US\$1 bln. Geographically the respondents live: 44% - in the USA, 21% - in Europe (except Great Britain), 16% - in the Asian-Pacific region, 10% - in North America save the USA (that is in Canada and Mexico), and 7% - in Great Britain, 2% - in Israel.

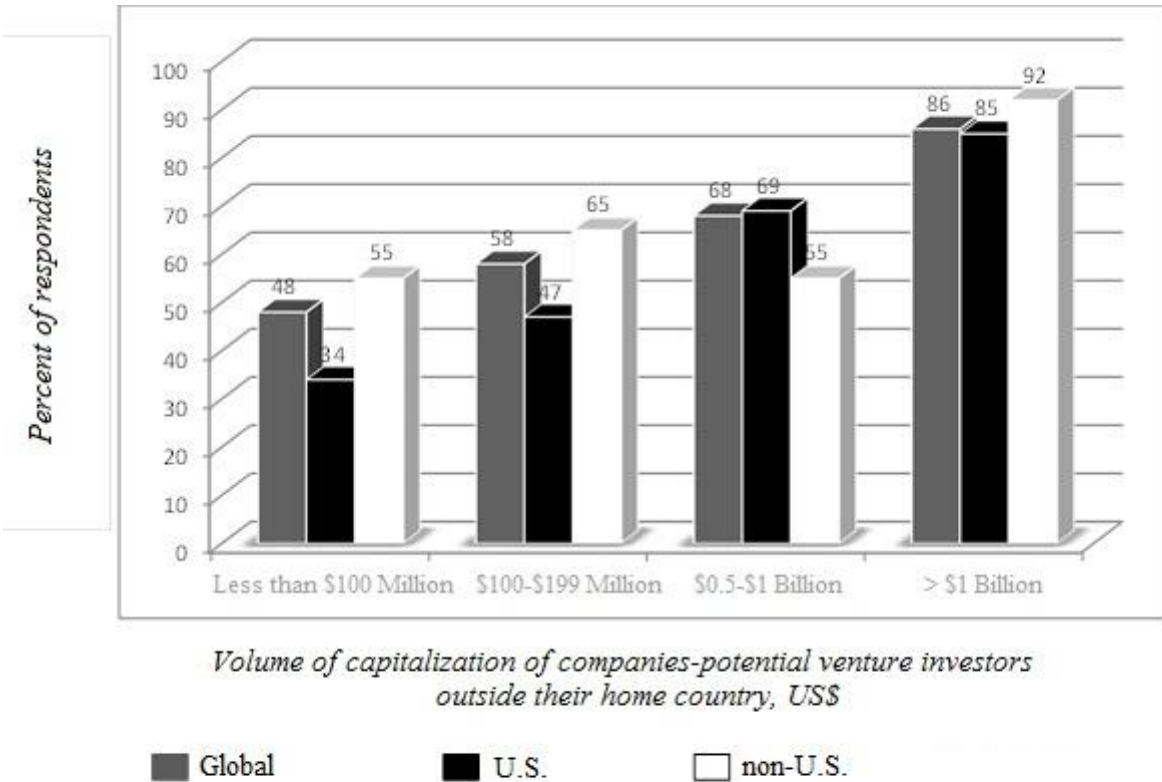


Fig. 18.3. Distribution of respondents-venture capitalists by potential investment in foreign venture enterprises

The data show that now the world market for venture capital differs from that condition in which it was before recession of 2008-2009, showing only insignificant steps towards globalization of venture investment branch. At the present stage the trends concerning searches for new perspective fast-growing markets and industries have been changed. The branches - semiconductors and telecommunications - earlier attractive to venture capitalists are losing their positions, giving way to sphere of clean technologies and life sciences. Recession revealed new markets with significant potential of growth and provided that the venture market always searches for modern breakthrough fast-growing markets, it is these branches of economy that are the most attractive to venture investors in the next years.

More than 50% of the interviewed capitalists plan to increase the level of venture capital investment. The majority of the world venture capital companies did not change

dramatically their venture investment strategy though we will note: when selecting these strategies they have become more sober and weighed.

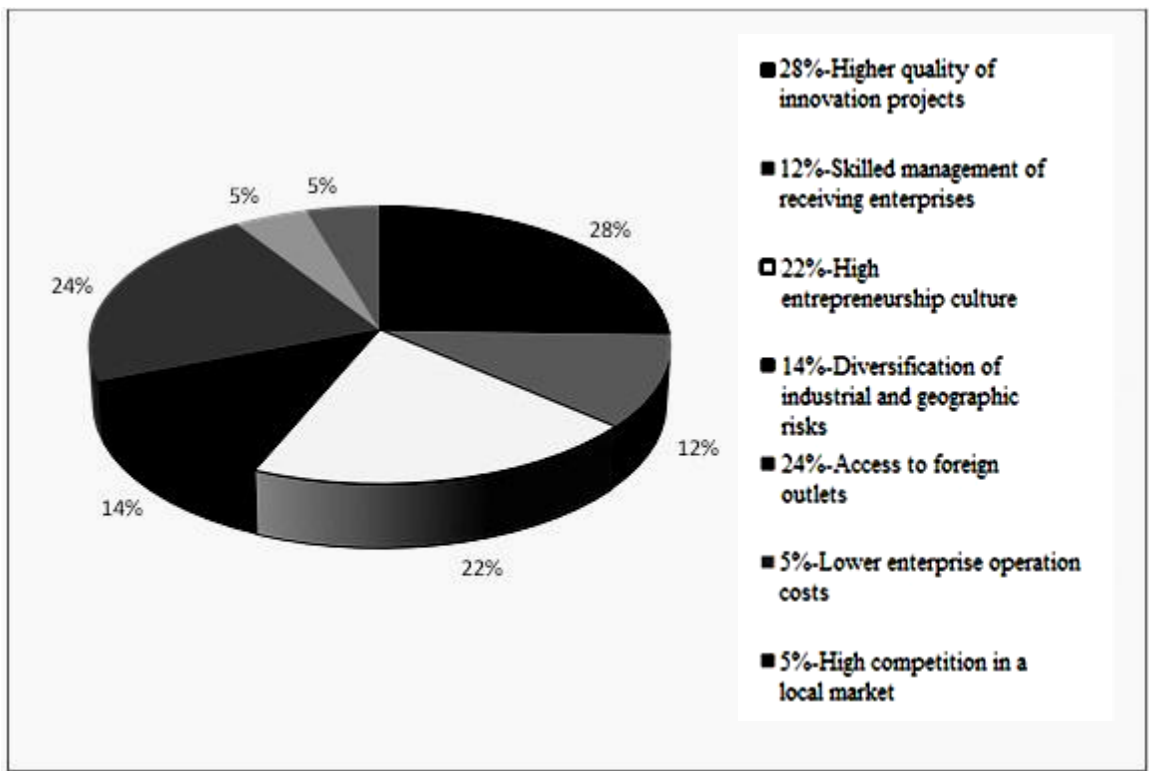


Fig. 18.4. Motives of making foreign venture investments, specified by venture capitalists

According to the received results of the research, on the average 36% of the respondents plan to change investment strategies towards investment in late stages of development of enterprises; about 59% of the respondents – to adhere to the same strategies of financing concerning stages of development of enterprises, as before the recession; 5% of the respondents focus their attention on early stages of development of enterprises.

As for investment strategies by industries then among the respondents financing the mentioned industries, have expressed a desire to keep unchanged and at the same level or to lower levels of investment of such industries in percentage ratio: telecommunications (15/56/29), semiconductors and electronic components (6/44/50), software (22/60/18), new social media networks (26/49/55), biopharmaceuticals (24/48/28), medical equipment (37/51/12), clean technologies (63/32/6) and consumer goods (24/51/25).

After having analyzed these percent data, we observe tendencies of substantial growth of levels of financing of clean technologies and decrease in levels of venture investment of semi-conductor, telecommunication and biopharmaceutical branches. Venture capitalists from Israel, the USA, and Great Britain declared that they would increase their volumes of investments in clean technologies by over 50%. As a whole among all the surveyed respondents 6 out of 10 have declared the increase in level of venture investment in branches of clean technologies area. It is this market that is considered the most prospective and fast-growing for venture investment. And that is clear, as the largest problem all over the world is environmental pollution, turning ecosystems into territories unsuitable for normal human habitation and so forth.

When comparing the surveys of the National Venture Capital Association in 2007 and 2009 we observable an interesting tendency: venture capitalists from all over world focus more and more their investments on the East – in the Asian-Pacific region and India, and in 2007 one third of the interviewed venture capitalists declared that they were interested in Europe as an attractive territory for venture capital investment.

One more trend is traced in a post-recession period of development of the global venture capital market. The world economic crisis has affected as decrease in investment possibilities of traditional venture investors as change of their risk investment strategies for more conservative. According to experts' estimates, 88% of commercial banks and 87% of investment banking firms will reduce their assets in the form of venture capital; 65% of the respondents assume decrease in venture assets by insurance companies, 63% - corporate operational funds, 59% - individual share investors, 57% - individual investors (angels) and rich families, 55% - public pension funds, 51% - private pension funds etc. Under such conditions the experts predict increase in the role of state structures in financial support of venture investment development, including through co-financing of venture funds and creation of so-called funds of funds, as well as corporate venture capital activation. Almost all the respondents have declared the desire to see state structures as a financial partner of their venture investments.

Thus, according to the 2009 surveys of the National Venture Capital Association (NVCA), in a post-recession period to restore volumes of venture capital investment to the former level, conduct basic scientific researches the increasing role should belong to the government. Since the majority of venture capitalists declare the growth of volumes of venture financing in the sphere of clean technologies and life sciences, and in these spheres of economy the government has the most influential levers to regulate them, venture capitalists expect from the government formation of a favorable environment for development of such branches of economy. Among the interviewed there is an opinion

about the basic actions and tools of the government which will accelerate development of innovations – this is support and development of stock exchanges, improvement of quality of a local infrastructure (airports, transport connection and electrical communications, construction of broadband networks and so on), technology transfer activity acceleration from research laboratories to business, improvement of access of innovative enterprises to private capital sources, increase in governmental support of enterprise activity, implementation of a favorable tax policy for development of enterprise and venture activity.

Development of the venture capital market in Europe confirmed the following tendencies: in 2009 98% of all venture capital in the European region was received from local companies of private and venture capital. The sum total of venture investments in 2009 made up €23 bln, at that, 5046 firms were invested in. The average size of investments which went to one firm in 2009 was reduced in comparison with 2008 from €9 mln to €5 mln. Companies at initial stages were mostly invested in mainly from the sphere of “life sciences”, communication branch, sphere of production of consumer goods and entertainments [132].

Let us consider the results of research conducted by the European Private Equity & Venture Capital Association in 2005. So, by a ratio of volumes of venture direct investments to GDP among the countries of Central and Eastern Europe the leaders were: Hungary (0.167%), Bosnia and Herzegovina (0.123%) and Estonia (0.120%). The most widespread kinds of venture investments in Europe in 2004 – 2005 are presented in table 18.2. In 2005 the European venture enterprises used various strategies for venture investors to exit the business (table 18.3) [169].

We focus attention on that that venture activity positively influences improvement of economic indicators of development of regions and a country as a whole. Thus, the statistical data on employment in Europe in 2004 indicate a stable growth of number of jobs: 16.9% of the surveyed enterprises increased the number of employees by over 100%, and 29.9% of the enterprises – by more than 50% (table 18.4, 18.5) [169].

Thus, 73% of venture enterprises in Europe increased the number of employees on the average by 25% a year. Small venture enterprises have ensured an average annual growth of employees by 68.7%. That considerably exceeds the indicator of an average annual growth of employment at venture enterprises in Europe which in 2004 was 30.5%.

Table 18.2.

**The most widespread kinds
of venture investments in Europe (2004-2005)**

Stages of venture financing (kind of investment), percent of usage among all made investments	Countries of Central and Eastern Europe	All countries of Europe
“Seed”, %	0	0.2
Start-up, %	1.8	5.0
Expansion, %	25.9	21.8
Period of the second stage of venture financing, replacement capital, secondary sale of shares in property of the first stage investors to other venture capital funds, %	24.8	4.8
Purchase of controlling interests with full control over the object of investment (buy-out), %	47.6	68.2
In tote all stages of venture financing, %	100	100
Total volume of venture investments for 2004, tsd. Euro	508 320	47 107 024
Total volume of venture investments for 2005, tsd. Euro	546 480	36 952 185

Table 18.3.

Exit strategies of venture investors in the countries of Europe (2005)

Exit strategies, percent of usage among all exits	Countries of Central and Eastern Europe	All countries of Europe
Sale to a strategic investor (direct sale to an interested company – trade sale), %	69.7	22.6
Public placement of shares of a venture enterprise (IPO), %	10.7	8.9
Reduction of enterprise value by the amount of incurred losses, damage (write-off), %	3.2	4.7
Repayment of borrowed funds, credits received from investors of the enterprise, %	1.9	23.3
Sale to another venture capital fund, %	5.9	18.3
Sale to financial institutions, %	0.1	4.0
Sale to managers (founders) of the enterprise, %	3.6	5.3
Exit by means of other strategies, %	4.8	12.7

Table 18.4.

**Average annual growth of employment
at European venture enterprises (2004)**

Average annual growth of number of employees at venture enterprises, %	Number of the considered venture enterprises, %
100 and more	16.9
50 – 100	29.9
25 – 50	26.0
10 – 25	10.4
0 – 10	9.1
0	5.2
Reduction (.. - 0	2.6

Table 18.5.

**Average annual growth of the number of employees depending on the size of a
venture enterprise in Europe (2004)**

Number of employees at the enterprise, persons	1 - 19	20 - 99	100 and more
Average annual growth of the number of employees, %	68.7	35.1	3.8

Indicators of activity of venture enterprises in Europe in 2004 by industries are worthy of attention. For example, for venture enterprises of branches of automobile industry and industrial instrument making it is characteristic: 25.2% of an average annual growth of employment, that by 4% higher than an average value of venture enterprises of all industries in Europe, average costs for R&D of one venture enterprise of the branch made €2.6 mln, ranking the third among industries by this indicator after biotechnology, medicine and health services; 94% of the companies of the named branch participated in increase in professional development of their employees (trainings, seminars). Average costs for R&D per one employee for 2004 made up €50693, among 500 innovative companies-leaders in Europe such indicator was only €8394 (table 18.6) [169].

Table 18.6.

Indicators of research activity of active European and non-European companies and investors in R&D of telecommunication equipment, electronics, computer engineering in 2004

Indicators	Top 700 companies from Europe	Top 700 companies outside Europe
R&D costs, mln Euro	13 906	64 366
Quantity of companies under consideration	132	219
R&D costs per company, mln Euro	105	294
Net sales proceeds, mln Euro	105 996	782 070
Number of employees, tsd. persons	436	3 212
Ratio of net sales proceeds per one employee, Euro	243	243
Investments in R&D per one employee, Euro	32	20
Ratio of investments in R&D to net sales proceeds, %	13.1	8.2

In 2005 venture investments in Europe were distributed by their kinds as follows: “seed” financing – 22% of all venture investments, start-up financing – 5%, expansion financing – 68%, financing through capital replacement – 5%, financing through purchase of controlling interests with the full control over object of investment (buy-out) – 0% . Total volumes of venture investments for 2005 in Europe made US\$ 55.1 bln; 67% of investments in R&D in Europe in 2004 were made by: automobile (19%), telecommunications (18.6%), pharmaceutical (18.2%) industries, as well as electronic equipment production (11.2%) [169].

Significant distinctions in indicators of European and non-European companies it is possible to explain by the presence of twice as many non-European companies of this sector of economy, and also by sizes of the companies, small number of employees at such enterprises, a ramified sales system. Besides, European enterprises of the average size are more technologically focused; non-European – more commercially focused. Sales volumes of the leading European companies of telecommunications sector provide only 3% of all sales volumes, and non-European guaranteed themselves the share (15.3%) of all sales volumes. The following companies were leaders in volumes of investment activity in R&D in the world in 2007: Microsoft, General Motors, Pfizer (USA, €5.58, €5.54 and €55.3 bln respectively), and also Toyota Motor (Japan), Nokia (Finland), Johnson & Johnson (USA), Roche (Switzerland), Volkswagen, Daimler (Germany) (table 18.7) [169; 170; 181].

Table 18.7.

**Companies - world leaders
in volumes of investment activity in R&D (2007)**

Companies/countries	Kinds of activity, industries	Volumes of investments in R&D, mln Euro (ranking position)
1	2	3
Microsoft (USA)	Software production	5583.89 (1)
General Motors (USA)	Automobile industry	5540.11 (2)
Pfizer (USA)	Pharmaceuticals	5532.59 (3)
Toyota Motor (Japan)	Automobile industry	5453.73 (4)
Nokia (Finland)	Telecommunications equipment	5281 (5)
Johnson & Johnson (USA)	Pharmaceuticals	5252.85 (6)
Ford Motor (USA)	Automobile industry	5129.74 (7)
Roshe (Switzerland)	Pharmaceuticals	5010.17 (8)
Volkswagen (Germany)	Automobile industry	4923 (9)
Daimler Chrysler (Germany)	Automobile industry	4888 (10)
Sanofi-Aventis (France)	Pharmaceuticals	4563 (11)
Samsung Electronics (South Korea)	Consumer electronics	4438.2 (12)
GlaxoSmithKline (Great Britain)	Pharmaceuticals	4419.43 (13)
Novartis (Switzerland)	Pharmaceuticals	4386.95 (14)
Intel (USA)	Semiconductors	3936.22 (15)
IBM (USA)	Computer manufacturing	3930.75 (16)
Robert Bosch (Germany)	Automobile industry	3560 (17)
Matsushita Electric (Japan)	Consumer electronics	3539.28 (18)
AstraZeneca (Great Britain)	Pharmaceuticals	3448.55 (19)
Honda Motor (Japan)	Automobile industry	3378.63 (20)
Alcatel-Lucent (France)	Telecommunications equipment	3368 (21)
Siemens (Germany)	Mechanical engineering and instrument making	3366 (22)
Merck (USA)	Pharmaceuticals	3339.66 (23)
Sony (Japan)	Electronics	3330.2 (24)
BMW (Germany)	Automobile industry	3144 (25)

Among 50 top companies in 2007 32 belonged to mechanical engineering branches (automobile industry, production of electronics and telecommunications equipment); 20 companies are registered in the USA, 18 – in Europe, 9 – in Japan, 2 – in Switzerland, 1 – in South Korea. Out of €372.9 bln invested by 1402 companies and leaders in

investments in R&D in 2007 the USA accounted for 32.2%, the EU countries – 32.2% (Germany – 10.9%, France – 6.7%, Great Britain – 5.2%), Japan – 18.4%, other countries of the world – 10.9% [170; 181].

Surveys of top companies in innovative sphere concerning the major factors, inducing to invest significant funds in R&D, allow drawing the following conclusion. For 26% of respondents the most important investment factor in R&D are consumer requirements (market demand) for new goods and services; for 19% - achievement of technological competitiveness; 14% - reception of incomes (profits), strengthening competition of European, American, Japanese companies – 8%, 7%, 6% respectively; availability of possibilities of cooperation in R&D sphere - 4%; public approval, positive approval by a society - 3%. Other factors are connected with professional possibilities of researchers and inventors of such companies.

Researches concerning intensity of R&D costs and proportion of new products in total amount of products sold of various industries showed that those of electronics and automobile by these indicators surpass average values in all sectors, conceding only to telecommunications, pharmaceuticals and aerospace branches (fig. 18.5) [169].

The analysis of the statistical data of enterprises by mechanical engineering branches in European and non-European countries confirms that the enterprises allocate significant means for R&D. Among the surveyed 1400 companies - leaders in volumes of financing of innovations, out of €372 858.5 mln of all R&D costs mechanical engineering subindustries accounted for 51.24% of investment costs in 2007. According to the structure of enterprises by industries in European and non-European countries, in Europe 49% of R&D costs, incurred by the surveyed companies, fell on the enterprises of a machine-building complex, outside of Europe machine-building and instrument-making enterprises made 50% by volumes of investments in R&D [172; 181].

Thus, the largest volumes of increment in R&D costs in 2006 in Europe were in such branches of mechanical engineering: semiconductors (15.8%) and production of office equipment (12.6%), as for non-European territories – in production of telecommunications equipment (17.9%) and production of engines and trucks (13.7%). With respect to increments in market capitalization, 2006 leaders in Europe became: automobile industry (58.6%), production of engines and trucks (73.5%), heavy engineering (55.2%), among non-European companies – production of engines and trucks (42.9%), production of telecommunications equipment (39.3%). Factors of R&D intensity in 2006 were the highest in semiconductors branch (14.8% and 12.9% at European and

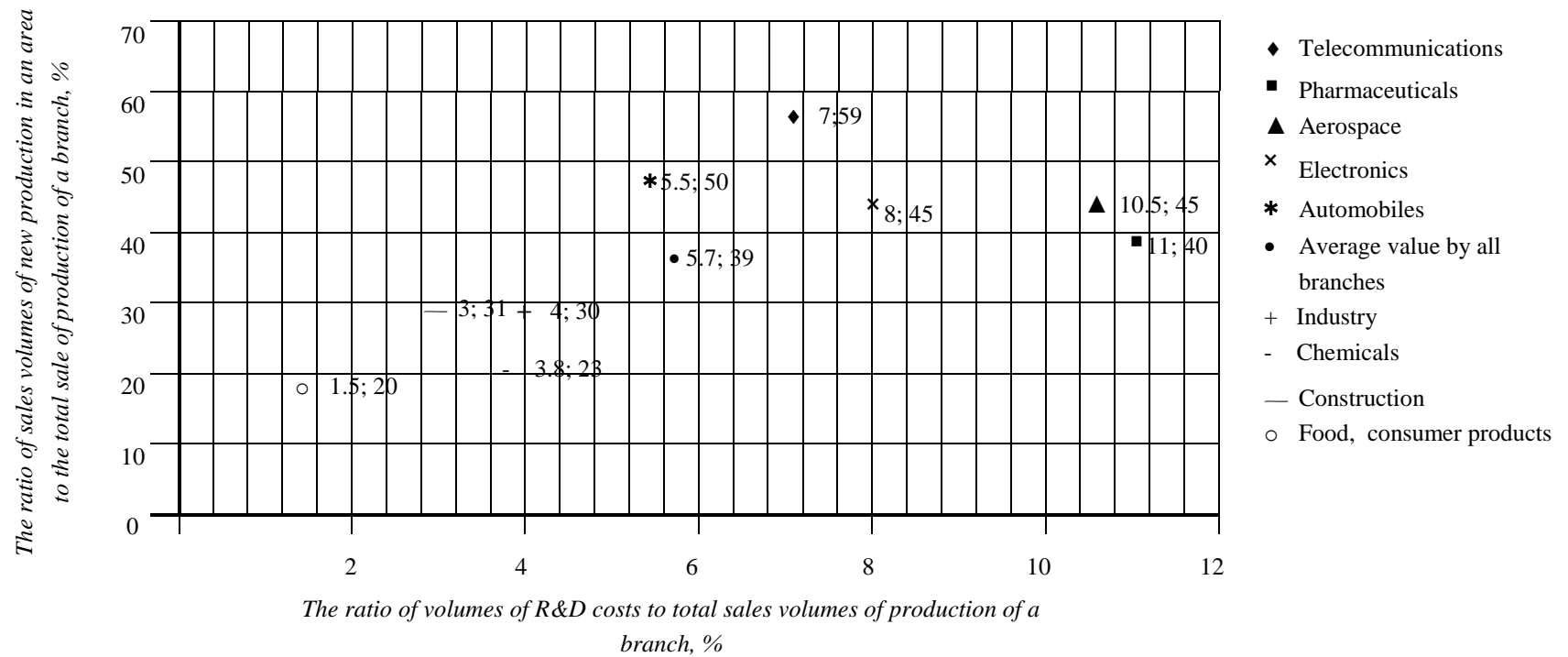


Fig. 18.5. Scorecard of proportion of new products and factors of intensity of R&D costs by industries in 2004

non-European companies respectively), production of telecommunications equipment (11.5%, 11.4%), electronic equipment (4.8%, 4.6%) and automobile industry (4.5%, 3.8%).

Having analyzed the most developed venture capital market, that of the USA, it is possible to trace, as volumes of its investments for 1995 – II quarter of 2015 (table 18.8) [131].

Table 18.8.

**Quantity of deals and volumes of venture investments in the USA
for 1995 — II qr. of 2015**

Year	Quantity of deals	Volumes of venture investments
1	2	3
1995	1 897	US\$ 8 016 523 400
1996	2 635	US\$ 11 285 423 000
1997	3 231	US\$ 15 067 154 600
1998	3 740	US\$ 21 525 677 500
1999	5 604	US\$ 54 897 773 400
2000	8 040	US\$ 104 993 648 800
2001	4 595	US\$ 40 937 602 200
2002	3 217	US\$ 22 191 875 700
2003	3 038	US\$ 19 682 160 600
2004	3 237	US\$ 22 858 191 000
2005	3 301	US\$ 23 242 888 700
2006	3 895	US\$ 27 860 904 100
2007	4 230	US\$ 32 063 165 700
2008	4 203	US\$ 30 401 178 700
2009	3 169	US\$ 20 323 833 300
2010	3 670	US\$ 23 465 298 600
2011	4 044	US\$ 29 907 054 500
2012	3 975	US\$ 27 629 368 000
2013	4 281	US\$ 30 197 535 700
2014	4 412	US\$ 50 297 295 600
II qr. of 2015	2 237	US\$ 30 999 175 400

The data show that the peak of activity of venture investors fell on 1999-2001, and mechanical engineering branches took leading positions in 2006-2008. Quantity of deals and volume of venture investments by mechanical engineering branches in the USA for 2006-2008 are presented in table 18.9 [171; 172].

About 40% by quantity of deals and volumes of venture investment in the USA mechanical engineering branches deal with. At that investment of late stages and expansion in 2007 accounted for 63% of all venture deals and 78.4% of all volumes of venture investments. For 2007 the quantity of deals stroke at early stages of investment in comparison with 2006 increased. Venture enterprises got 62.9% of the venture

capital, while being at 3-6 rounds of financing, 65.5% of enterprises that were invested in 2007 received venture means for the first time. 2008 data show an insignificant growth of venture investments proportion in the mechanical engineering branch up to 46.21% of all volumes of venture capital invested by US investors [171].

Table 18.9.

**Indicators of venture investment in the USA
by mechanical engineering branches for 2006 – 2008**

Mechanical engineering branches	Quantity of deals			Volumes of investments, mln US\$		
	2006	2007	2008	2006	2007	2008
1	2	3	4	5	6	7
Health care equipment manufacturing	333	398	374	2793	4069	3460
Telecommunications equipment manufacturing	301	296	233	2594	2263	1688
Energy equipment manufacturing	198	300	345	1870	3248	4651
Semiconductors manufacturing	250	215	180	2143	2085	1651
Networking equipment manufacturing	135	132	95	1066	1295	645
Electronics branch	95	94	87	689	589	573
Production of computers and components	73	67	66	497	612	409
In tote by all mechanical engineering branches	1385	1502	1380	11652	14161	13077
In tote by all branches, invested by venture capitalists	3630	3952	3808	26550	30886	28298
Proportion of mechanical engineering branches performance to the total one by all branches, %	38.15	38.01	36.24	43.89	45.85	46.21

The largest regional center of venture capital concentration in the USA is Silicon Valley, San Diego. That region in 2007 accounted for 48% of total amount of deals and 54% of total volumes of venture investments of the USA. California, Texas, Washington, New York and Pennsylvania States in 2008 entered into 10 largest areas of venture investments, by attracting 83% of all investments of the USA and 78% of all venture deals. The most active venture capital firms in 2008 in USA were *Draper Fisher Jurvetson* (Menlo Park, CA – 96 deals per year), *New Enterprise Associates* (Baltimore, MD – 82 deals), *Polaris Venture Partners* (Waltham, MA – 77 deals), *Kleiner Perkins Caufield & Byers* (Menlo Park, CA – 74 deals), *Venrock Associates* (Palo Alto, CA – 60 deals) [171].

The review of typical exit strategies for 2005 – 2007 confirms the rise of popularity of IPO in comparison with agreements like M&A, quantity of IPO deals in the fourth quarter of 2007 has reached a historic high. In toto in 2007 *IPO* accounted for 22.1% of

all exits and 30.3% of volumes of attracted investments in 2007. However proportion of exits through agreements like *M&A* in 2007 remained rather high – 77.9% of all exits and 69.7% of volumes of attracted investments [171].

It is not sufficient to study the experience of venture capital development in the world centers of venture growth which it is considered to be the USA and Europe. Modern trends of venture entrepreneurship development across the world show it is possible that the USA will lose its monopoly position and leadership in the sphere of venture financing of high-tech industries. The countries of Asia increase volumes of venture financing, help development of specialization of the countries regarding support of certain hi-tech industries by the venture capital. It is the venture capital that promotes growth of those industries which have competitive advantages in its country of use. According to the data of a consulting company Deloitte and the National Venture Capital Association (NVCA), based on surveys of 400 venture capitalists from all over the world, Germany may become a new leader in the sphere of alternative power engineering, Japan – in the area of telecommunications, in the sector of semiconductors – Taiwan, in software development – India (35% of voices), Great Britain and Israel. The USA is, undoubtedly, in the lead in the biopharmaceuticals, health care equipment manufacturing and services by volumes of venture financing [161; 183].

One observes an active development of new venture capital markets, particularly; venture capital funds are created in China (IDG, Accel), India (Séquoia, SVB), South Korea (Walden), Vietnam (IDC Ventures), the Middle East (Minah Ventures), Eastern Europe (DFJ), Brasil (Darby). The total amount of venture capital in China for 2005 made up over US\$ 1.5 bln [54]. The total amount of venture capital in the Asian-Pacific region for 2006 achieved US\$ 26.5 bln in comparison with the first quarter of 2005, when it was US\$ 6.2 bln. The sectoral structure of venture investment portfolio in Asia, unlike in the USA, is uniform, i.e. venture capital is invested in various industries, ensuring stable development of economy of these countries as a whole (table 18.10) [64].

The countries of Asian-Pacific region by proportion of the venture capital in management go in the following order: Hong Kong (28.7%), Japan (25.7%), Singapore (9.9%), Korea (8.3%), Australia (7.8%), China (7.1%), the Chinese Taipei (the same Taiwan - 5.6%) of total volume of an investment portfolio which made US\$ 122.039 bln in 2005. Out of 1638 established asset management funds (companies) the majority is in: Japan (17%), China (15.8%), Australia (11.6 %), Hong Kong (11.1%), the Chinese Taipei (10.4%), Korea (10.4%), and India (5.9%).

Table 18.10.

**Distribution of venture investment portfolio
in the Asian-Pacific region in 2005**

Industries	Volumes of investments		Number of enterprises	
	US\$ mln.	Proportion, %	pcs.	Proportion, %
Financial services	18132	19.3	1152	3.9
Telecommunications	11285	12.0	2306	7.8
Computer technology	10492	11.2	4432	15.1
Transport/distribution	8058	8.6	573	1.9
Information technology	7610	8.1	3913	13.3
Industrial production output	5677	6.0	3568	12.2
Electronics	4791	5.1	2913	9.9
Metallurgy	1382	1.5	240	0.8
Instrument making	1082	1.2	415	1.4
Others	25440	27.08	9883	33.62
Total	93949	100	29395	100

The study of statistical data about quantity of venture deals and volumes of venture investments in the mechanical engineering area caused the necessity of the analysis of the basic venture activity organization forms which is chosen by the world's leading engineering companies. Let us tell the instrument making companies, known in the world, take an active part in venture activity: Intel, Motorola, Comcast – through corporate investment venture capital funds, Walt Disney, Amazon finance start-ups; Google, by changing its investment policy, creates investment venture capital fund for development of new directions of activity. Earlier this company absorbed innovative technological firms, and then decided to invest in innovative solutions at early stages of innovation projects, including through purchase of start-up enterprise Omnio for US\$ 15 mln. Virgin Galactic Company with the aid of venture capital has developed an aircraft White Knight Two to launch to the near space spacecrafts which can accommodate up to 500 persons simultaneously [129].

Despite rise of popularity of internal venture entrepreneurship and formation of corporate venture capital funds, examples of external ventures creation for the purpose of development of new products in sphere of information and telecommunications equipment become widespread. These are particularly:

- strategic consortium Open Patent Alliance (OPA), that pooled Alcatel-Lucent, Cisco, Clearwire, Intel, Samsung Electronics, Sprint; developing new equipment based

on WiMAX technologies and ensures the use of mutual patents through a patent pool of these companies. The total amount of investments in a project of development of means of mobile access made up US\$ 3.2 bln;

- industry consortium Industry Consortium for Advancement of Security on the Internet (ICASI), created by top IT companies Cisco, IBM, Intel, Juniper Networks, Microsoft in order to introduce and develop innovative engineering decisions to increase the safety of data transmission on the Internet;

- consortium HomeGrid Forum, created by such companies as Infineon Technologies, Intel, Panasonic, Texas Instruments et al., providing for development of equipment digital content transmission;

- joint venture Fujitsu Siemens Computers (FSC), created by Fujitsu and Siemens in 1999 to develop and manufacture computers;

in automobile industry and electronics:

- alliance Renault-Nissan and venture capital firm Project Better Place, they develop and manufacture electric cars; automobile company Liberty Electric Cars with venture investments of $\text{£}30$ mln manufacture electric cars; Japanese companies Subaru, Mitsubishi, Honda are designing automobiles with electric motors.

- joint venture SB LiMotive, created by Samsung and Bosch with the initial capital of US\$ 20 mln manufactures lithium-ion cells for hybrid transport vehicles; there is a collaboration of Continental, Mercedes, Audi and Sanyo, and Renault and Nissan cooperate with an alliance of similar cells developers which includes Toyota, NEC, Panasonic.

- establishment of enterprises manufacturing lithium-ion cells by Sony and Electrical Industrial Co (Panasonic), that invested till 2010 US\$372 mln and US\$930 mln respectively.

Examples of absorption of hi-tech enterprises by the world's leading companies for expansion of directions of their activity are not infrequent. General Electric for the purpose of profit growth focuses its attention on new industries, particularly, manufacturing medical, drilling, energy and aerospace equipment. With that end in view the company plans to absorb a number of enterprises in activity directions, strategic for it, in particular is buying an aerospace division of Smiths Group Company for US\$ 4.8 bln [129].

The analysis of the statistical data of the developed countries of the world regarding venture entrepreneurship allows drawing a conclusion, that the venture capital – catalyst of development of many industries.

18.2. Importance of venture capital for university ventures development

Under conditions of globalization and competition as active participants of venture business become universities – sources of scientific, innovative searches in venture activity. Global trends favor transformation of universities, traditional by functions in entrepreneurial which find innovative opportunities, make organizational changes of their structures for the purpose of reception of the status of entrepreneurship subjects enjoying full rights. The concept of an innovative or entrepreneurial university is based on five activity principles, formulated by B.R. Clark in 1988:

1. The *principle of powerful operating center* provides for formation of an effective team of managers of an institute of higher education, professional selection of candidates for key posts, uniform control center, concentration of efforts and interaction among all divisions of university – educational, scientific, and commercial.

2. The *principle of entrepreneurship* as the basis of changes and search for new possibilities of development. It demands creation of independent enterprises for intellectual property commercialization of an institute of higher education, offices of technology transfer, offices dealing with alumni, structures for support and establishment of relations with corporate business area.

3. The *principle of developed and flexible infrastructure* of university assumes formation of science and production complexes to provide various educational, scientific and commercial services both to its structural units, and outside organizations.

4. *Principle of diversified structures of financing and enterprising fundraising*. It is a principle of multi-channel financing, studying various sources of resources of development funds of institutes of higher education, including venture capital funds to support venture spin-outs: formation of funds endowed by individual persons, alumni who are at the head of leading enterprises and corporations, venture capital funds – by angels, corporate business, pension funds etc.

5. The *principle of interest* in organizational changes of management structure of an institute of higher education and its individual divisions on the basis of creation of shared university entrepreneurship culture. It provides for formation of new structures to render various services to venture spin-outs, consultations to third-party organizations and so forth.

The most well-known innovative universities in the world are the University of Warwick (England), the University of Strathclyde (Scotland), the University of Joensuu (Finland), the Twente University (Netherlands), the Chalmers University of Technology (Sweden) and others. However universities of the USA are considered as the most

successful institutes of higher education as for organization and support of both venture spin-outs and spin-offs: Stanford University (California – Silicon Valley), University of Wisconsin (Madison), University of Washington (Seattle) that ranked among the first in 2006 regarding volumes of attracted venture capital by academe. One knows university spin-outs – Google, Sun Microsystems, Yahoo (of Stanford University). By efficiency of performing venture activity within universities Stanford University distinguish itself, then go Cambridge University, the Southampton University, the Imperial College and Oxford University [179]. Volumes of venture capital attraction by institutes of higher education in Britain and the USA are essentially different. So, Stanford University in California attracted in 2006 twice as much as Cambridge did which ranked first in Great Britain.

The largest scientific and technical clusters in the world – Silicon Valley (California, USA), Cambridge (Cambridge, UK), Tel Aviv (Tel Aviv, Israel), SE England (Southeast England), Oxford (Oxford, UK), London (London, UK) and others. [166; 182]. In particular, in the USA powerful research universities are Stanford University and Massachusetts Institute of Technology which for 2006 stroke 338 deals to invest their spin-outs to amount of €2.1 bln.

University venture entrepreneurship emerged only in the 90s of the XXth century. Such kinds of ventures developed the most in the USA – country - the founder of venture entrepreneurship, and in a number of European countries with developed capital markets.

Let us consider the experience of the world's leading countries and their known universities in commercialization of activity results. Since the mid-1990s of the last century in Great Britain there occurred a significant growth of spin-outs. For example, in 2006 the number of university spin-outs reached 590. They attracted about 12% of total volume of venture capital investments in Great Britain to the amount of €2 bln of external financing. Such growth was caused by a high level of academic researches at the universities of the country, proved by a large number of Nobel Prize winners, that indicated a high level of scientific studies of institutes of higher education.

Great Britain – ranked third in the world after the USA and Japan by the level of scientific researches and published works, and among European countries it has the highest indicators of efficiency of scientific research (it is followed by France and Germany). According to the rating of world's top universities by Shanghai Jiao Tong University, Oxford and Cambridge educational establishments are ranked 2nd and 10th, respectively (table 18.11).

The most fruitful relations between university and companies of technology transfer and creation of spin-outs established at Cambridge, Southampton, Oxford universities and Imperial College. Cambridge University has significant advantages in ventures creation owing to its favourable location and use of all advantages which it has due to belonging to Cambridge Technological Cluster.

Table 18.11.

The rankings of world's top ten institutes of higher education in 2006.

Rank	University	Country of location
1	Harvard University	USA
2	University of Cambridge	Great Britain
3	Stanford University	USA
4	University of California – Berkeley	USA
5	Massachusetts Inst Tech (MIT)	USA
6	California Institute of Technology	USA
7	Columbia University	USA
8	Princeton University	USA
9	University of Chicago	USA
10	University of Oxford	Great Britain

For 2006 the total amount of venture investments in the world was €5.5 bln, of them Great Britain attracted 1.8 bln. In May 2007 in Great Britain there were 1688 venture enterprises, 30% of them operated in the field of information technologies, 25% - in the sphere of services, 17% - public health and science. For 2006 British university spin-outs attracted €160 mln, having ensured a 12 percent share of total volumes of venture investments in Great Britain for this year. In May 2007 in Britain there were 590 university spin-outs which attracted £2 bln of external investments. British university spin-outs take significant advantage in comparison with other European companies of this type, as the venture capital market of Great Britain – the most developed among the countries of Europe both by volumes and by quantitative and qualitative composition of innovative infrastructure of such activity support.

Let us highlight the main preconditions of spin-offs growth:

1. Underestimation of ideas, inventions of employees of universities, unsatisfactory working conditions in institutes of higher education, and also expectation of self-realization and reception of gains through creation of own enterprises.

2. Mobility of scientists, possibility easily and quickly to change places of employment.

3. Low barriers to entry in a branch as well as high geographical concentration of branches where spin-offs are established.

4. Fast technological changes of environment.

5. Venture innovation infrastructure organizations.

6. Existence of a considerable quantity of market niches for products of spin-offs with specificity of work known for inventors (these niches can be revealed only by experts in this field of knowledge, and thanks to narrow specialization and special education scientists ensure speed in estimation and discovery of possibilities to satisfy branch requirements and to enter into it) and narrow supply of product lines.

7. Young fast-growing markets and branches lowering barriers to entry for spin-offs [107].

The essential conditions of university spin-outs development, according to H. Hauser – one of the heads of Cambridge Venture Fund Amadeus, are:

- scientific and technical clusters, that is concentration of talented scientists, inventors round universities;

- entrepreneurial spirit shared by scientists, students, employees of universities;

- venture capital resources, active venture investors who are ready to put it in academe businesses, venture innovation infrastructure activity, (giving consulting managerial, information, marketing and other services);

- work of the government directed on creation of a favorable climate of innovative entrepreneurship (governmental programs of young enterprises support and stimulation of venture investors to put means in university researches, tax and credit privileges for young enterprises);

- wish of large business to co-operate with small innovative enterprises – use of corporate venturing mechanisms [82].

It is interesting to study the experience of Cambridge University in organization of technology transfer activity. The university makes a significant part of the Cambridge Cluster. In the beginning of September 2007 the cluster numbered 108 public venture enterprises with capitalization of over €600 mln that by volumes of venture assets equaled 10% of total venture assets of Great Britain. For the first quarter of 2007 the cluster attracted 18% of total venture investments in Great Britain. The first university spin-out GlaxoSmithKline in 2006 had market capitalization of €230 mln [166].

The cluster includes angels' groups; venture capital funds Great Eastern Investment Forum (GEIF), Cambridge Capital Group, and Cambridge Angels which provide

financial support to venture enterprises. The important peculiarity of the Cambridge Cluster is a close connection of the venture capital with academic researches of Cambridge University. It directly and indirectly influences cluster development on the whole. Directly it shows itself by way of technology transfer, joint researches with corporate business, licensing and formation of spin-outs, indirectly – in formation of scientific and technological knowledge base of the cluster, creation of alumni networks and keeping close contacts with them, formation and development of entrepreneurship culture as among students as among instructors of the university. Within frameworks of the cluster the university established close connections with corporate business regarding cooperation in training of talented students and undergoing practical training using the facilities of such companies, experience acquisition by internship in the companies whose names are known world-wide. After internship such students are encouraged to return to the region for the purpose of application of the gained experience at enterprises of the region and creation of their own enterprises. Successful alumni establish connections with students; give support and valuable knowledge to inspire the latter to become entrepreneurs.

At the university there are 16 groups which involve students in entrepreneurial activity and putting their innovative ideas into practice through creation of own enterprises. The known programs of such encouragement of students are Cambridge University Entrepreneurs (CUE), Centre for Entrepreneurial Learning (CfEL), Cambridge-MIT Institute (CMI), i-Teams. They by means of the Cambridge Network inform and organize appropriate actions: competitions of business plans, acquisition of experience within frameworks of exchanges of students, practical work of interdisciplinary groups of students in departments of the university commercializing inventions.

The leading British technology transfer companies include Imperial Innovations – subsidiary of Imperial College London established in 1988. Its staff totals about 30 employees who help to realize full commercial potential of work of scientists and inventors of the college [13]. The subsidiary renders services of new technology licensing, creation of spin-outs, support for creation of strategic diversified partnership, those of examination of the commercial potential of scientists' basic research, of possibilities of licensing and protection of the intellectual property objects; financial and administrative experience for realization of the idea from the initial stage till the final market product output. To create spin-outs Imperial Innovations have specially selected potential directors and managers for commercial issues with an operational experience with such companies. The service of business development maintains close connections

with business structures, helps to establish interaction and cooperation among Imperial College and required companies. Thanks to close co-operation with the enterprises of Great Britain Imperial College receives more than €20 mln of sponsors' money for researches. Throughout its existence Imperial Innovations created 60 spin-outs, attracted €175 mln of external investments. With its support there is a structure for conclusion of agreements at early stages of development of innovative enterprises, their management and sale of shares in property of some of such spin-outs. This structure has made Imperial Innovations one of the best multisectoral consulting companies, having the most competent teams of managers in the sphere of university office of technology transfer. Major factors of success of Imperial Innovations in this sphere are:

- developed and actively applied systems of management of spin-out companies, allowing to carry out a flexible process of conversion of inventors' intellectual property objects in business proposals with significant potentials of growth;
- ability to select and satisfy short-term and long-term needs of business structures in developments, created using the facilities of the college;
- combination of a high level and quality of education with an active support of entrepreneurial culture among students and teachers of the college.

Organizational structure of Imperial Innovations includes teams of technology transfer (one team of transfer is connected with faculties of medicine and of humanities – life sciences, another – with those of engineering and physics), "New enterprises" service, group of assets and investment managers, group of business support. The teams of technology transfer estimate inventions by their commercial (market) potential; work out strategy of management of intellectual property objects and patent portfolio of the college, select forms of technologies commercialization by means of licensing or spin-out, manage created spin-outs; deal with marketing licensing et al. "New enterprises" service promotes an incubatory support of spin-outs at early stages of their emergence, manages them, searches for possibilities of their development. The group of asset and investment managers handles shares of the college in companies, being at late stages of development. The business support group – this is usually financial managers, lawyers, patenting and licensing managers, marketers, managers for HR and administrative issues and IT managers. They supply with the necessary manpower young spin-outs, offer various administrative, financial, legal services regarding the information management.

Inventors' technology transfer applications are received by groups of technology transfer, they are considered by an appropriate group of experts, and by results of detailed examinations and analysis pass judgment (draws a conclusion) about possibility of commercial use of technologies and that of their patenting. At that Imperial

Innovations can take upon itself the management of technology commercialization, and for that to be rewarded accordingly – stake in ownership of such enterprise or payments under a licensing agreement as royalties. Let us notice, that Imperial College has the right to all intellectual property objects created by its employees. The process of acquisition of patent can last from three to five years, each stage of detailed check of possibilities of patenting of inventions, registration of applications for a patent demands significant expenses of financial resources which are incurred by Imperial Innovations. For financing of commercialization process of inventions the subsidiary can grant access to the general funds of universities of Great Britain. The mutual technological programs among institutes of higher education of Great Britain allow getting access to quality market researches of future innovation, and the college program to compensate inventors – to distribute remuneration from the commercial use of the patented objects and sale of licences. The experts of Imperial Innovations can make the decision on expediency of creation of spin-out companies and work out business- and commercial strategies of development for this purpose. The basic selection criteria of decision on creation of a spin-out – an interesting business proposal which will find its investors, a wide spectrum of use of technologies and high growth potentials of such technologies (inventions) market. The company has various forms of organization of structures of spin-outs depending on degree of inventors' participation in control of such enterprises. Managers of Imperial Innovations can assist in the preparation of a spin-out business plan or in attraction of external advisers. After submission of a business plan and achievement of agreement on treaty provisions both registration and legalization of an enterprise of spin-out type can take place. Co-investors of such enterprise – various business structures, venture capital funds, angels' funds. After registration of the enterprise, election of the board from among its shareholders Imperial Innovations appoints the chairman of the board having experience in creation of spin-out companies. Scientists also have the right to be representatives in the management of such enterprise. "New enterprises" service included in incubation managers, managers of spin-out network and marketing actively participate in enterprise control. The networks established by managers of Imperial Innovations with the companies which can render services to start-up enterprises, reduce the process of innovations commercialization and ensure access to quality services.

Objects of venture innovation infrastructure considerably support innovative entrepreneurship in British clusters. They include: the first angels network of the Great Britain “Oxford Investment Opportunity Network” (OION), created in 1995, TVIN - network of business angels of the Thames Valley which unites Thames Valley Economic Partnership (TVEP) and Southeast Economic Development agency (SEEDA),

angels network Oxford Early Investments (OEI), created by Oxford Innovation in 2004, a network of angels of Northamptonshire Silverstone Investment Network, formed in 2006 by Oxford Innovation Ltd supported by Oxford Technology Management.

It is important to study the experience of support and creation of university spin-outs in the countries where the venture entrepreneurship is insufficiently developed, there is no innovative infrastructure, including scientific and technical clusters and close connections with the corporate business [152].

As already mentioned, venture spin enterprises in Europe have recently emerged – in the 90s of the previous century, and the process of spreading of mechanisms of creation of university spin-outs occurs more slowly, than in the USA. It is caused by unstable development of capital markets, in particular venture one, in Eastern and Central Europe; the majority of universities work outside of clusters, that explains a small amount of such companies in the market of Europe, and the results of such enterprises in comparison with the American analogues are very modest. Besides, organizations of support of such innovative enterprises are inaccessible to them because of a stiff price of services. Universities cannot ensure qualitative provision of such services directed on testing of product concept, its selection and proper support. The significant problem is that that the majority of spin-outs arise outside of technical clusters, therefore they have no access to corresponding services. Until recently the technology transfer was not among the kinds of activity of the majority of institutes of higher education of Europe, was not stated in their missions at all. Weak level of diagnosing of concepts of ideas predetermines selection of the firms having small potential of market growth, and weaker inclination of some nations for the entrepreneurship favors that the majority of European ventures are to a lesser degree focused on fast growth which is shown by ventures in hi-tech clusters of the USA.

Formation of innovative science and production complexes (clusters) using the facilities of leading institutes of higher education of our country with creation of infrastructural objects round them, establishment of connections with business structures and research universities will allow ensuring a high quality of preparation of experts in the sphere of scientific and innovative activity and will transform them into the centers of growth of innovation economy and social and economic development of the country. The significant role in this process belongs to the government support for working out and adoption of legislative acts that should stimulate processes of private capital attraction by innovative universities.

18.3. Prospects of venture business development

The venture capital market under the conditions of globalization of the world markets is also in the state of international integration and specialization. The results of 2009 survey concerning a geographic distribution of respondents by their strategies of increase in levels of investment of the venture capital in enterprises of different countries are interesting. So, 50% of the respondents answered that they would increase venture investment in the Asian-Pacific region, excluding India, 43% by contrast planned to increase their investments in India, 36%-in South America [162]. In the conditions of globalization venture capitalists study the new markets of the countries of the world, being in constant searches, all around the world, for those projects which correspond to their investment strategies.

Undoubtedly, the most trendy investment countries, including for the foreign venture capital, remain China and India. Nowadays China shows impressing growth rates of GDP: in 2009 it was the highest performance in the world and made up +7%. Therefore, according to experts' estimates, China will become the first country to exit the global crisis. China was a clear favorite among U.S. investors with 42% of respondents believing that the country has the most to gain, only 24% held that conviction for the U.S., followed by 12% for India, 5% – Brazil and 2% for Russia.

Among the respondents from the Americas (excluding the USA), 35% focus on Brazil, 18% -China, 16%-Canada; 36% of venture capitalists from Israel selected the USA, followed by Brazil and Israel (14%) and India (7%) as priority areas of investments.

Asia Pacific respondents (55%) plan to invest venture capital in China, 20% - India, 6% - in Japan, 5% - in the USA, 4% - Afghanistan, 27% of respondents from Europe (excluding the UK) see China as having the most to gain, 16% - India and the USA, 7% - Brazil, 6% - France. 35% of UK respondents eyed China as the clear winner, with India following at 24%, the U.S. at 9 percent and the United Arab Emirates at 6 percent. [162].

Thus, the globalization affected the venture capital market as well. An active transfusion of the venture capital on a global scale is observed. More and more venture capitalists in search for new prospective fast-growing markets for venture investment go outside the limits of the national markets of venture capital.

When the global market survey of the venture capital was conducted for the first time, one observed emergence of the international markets of the venture capital which was concentrated at several leading firms with risk capital. Today more and more

companies enter the international markets of venture investment, and the venture sector covers new venture entrepreneurship subjects. Though the world economic crisis and the global recession interfere with the further globalization of the market of venture investment, adjustment of investment strategies by venture capitalists all over the world is traced. But simultaneously the branch of venture investment continues to move ahead to increased globalization. The current recession could not keep venture capitalists out of searches for better investment possibilities to earn significant incomes for their investors due to successful exits.

On a global scale the growth of venture financing volumes in the following industries is predicted worldwide:

1. Renewable power (the volume of investments on a global scale is expected up to US\$ 2.5 tln. in 2030). The energy companies making components to use renewable energy: wind turbines (wind power), water turbines, solar energy ones should become the main recipients of the venture capital.

Among those who will be able to get the venture capital, there are companies:

- involved in transformation of energies from small turbines of various forms of low carbonaceous energy;
- involved in generation and application of hydrogen as low carbonic energy source;
- which ensure the use of clean fuel and promote transition to the low carbon economy, including – business structures concentrated on the carbon trade.

2. Branches of increase in scarce resources use efficiency. Here the companies working in the sphere of decrease of expenses for electric energy consumption and increase in efficiency of primary products and materials use should become main recipients of the venture capital. These are, particularly, companies:

- in the sphere of management and saving of energy, ensuring an effective lighting and working out of electric systems, offering an effective heating and ventilation and isolation systems;
- optimizing managerial processes, supplying industrial equipment of processes (pumps, valves which help to save energy and other resources promoting saving by consumers).

Such companies include Johnson Controls (USA), SIG (UK).

3. Environment preservation branches. The total market capacity of clean products and environment preservation services in 2004 was estimated to be US\$ 548 bln. Its further growth by 45% till 2015 with the total market capacity of US\$ 800 bln is predicted in 2015.

According to the forecast, the main venture capital recipients should become the companies:

- offering recycling and reuse of resources, new management methods of processes of application of closed cycle materials, providing solutions for reduction, repeated use, avoiding of waste during repeated cycles and advancing the usage of renewable materials;

- putting forth new proposals for pollution control, monitoring technologies, ensuring solution of this question to exclude or reduce pollution and to solve problems of efficient pollution management;

- introducing ecosystem resources controlling mechanisms, advancing sustainable use of the land and waterside areas, and also critical resources of ecosystems;

- of nature conservation, rendering consulting and other information services, giving advices on selection and application of effective methods and solutions for minimum harm and impact on environment;

- producing mainly cleaner products, ensuring production which minimally influences environment.

Such companies include RPS (Great Britain), Sims Group (Australia), Stericycle (USA).

The most attractive to venture investors are the companies:

- of water treatment (render water management services), providing water treatment, distribution, medical treatment and water services which allow recycling secondary raw materials;

- manufacturing the water equipment and technologies guaranteeing solutions of the problem of water rational use.

Such companies include Energy Recovery (USA), Severn Trent (Great Britain), Veolia Environnement (France).

4. Branches of population life quality improvement. These are the companies united by the acronym LOHAS (Lifestyles of Health & Sustainability – healthy life-style with possibilities of support and personality development). They ensure solutions advancing physical activity and health diet, and also promote green (ethical) protection of consumers. Here social care and support companies are included as well. They guarantee possibilities for care of the most vulnerable strata of society, in particular youth and seniors. These are Care UK (Great Britain), LifeTime Fitness (USA), Wessanen (Netherlands) et al.

5. Sphere of increase in products and services use efficiency. It includes the companies:

- of increase in products use efficiency, manufacturing goods and services with possibility of recycling and minimum negative impact on environment; as well as products promoting saving and frugality of consumers;
- offering clean transport technologies, including services in modal movement, performing them or acting with mass transport solutions;
- providing technologies for reduction of transport pollution from existing transport technologies.
- rendering demand management services by reducing energy needs and intensively polluting transportation services.

They are First Group, Johnson Matthey (Great Britain), Shimano (Japan).

6. Branches of vital activity safety increase. maybe retranslate all titles They include the companies:

- developing products increasing vital activity safety, in particular concerning occupational safety at enterprises (reduction in risks from use of harmful substances or dangerous processes at a workplace);
- manufacturing safe products, improving safety of consumer production through tests and inspection;
- of housing and commercial safety (make houses and business structures safe).

These are Autoliv (Sweden), Intertek (Great Britain), Secom (Japan).

7. Sphere of advancement and maintenance of social property functioning. It includes the companies promoting and ensuring social property functioning and its financing. They:

- give and facilitate access to habitable social housing;
- support the socially available services organizations;
- revive a society and local economy.

These are Eaga (Great Britain), Sirius Real Estate (Germany), Bellway (Great Britain).

8. Public health sectors. The public health market in 2007 was estimated of over US\$ 629.4 bln. According to the forecast, the main venture capital recipients should become:

- companies manufacturing products which promote solution of health problems, including preventing and helping at early stages to reveal diseases, providing the solution to lower the probability of illness and ill health and helping early diagnostics development;
- medical facilities that provide an effective treatment, being especially focused on fatal illnesses (for example, cancer, HIV/AIDS and so on.)

- companies which facilitate availability of health protection, offering the goods and services to maintain good health and feeling of well-being.

So, summing up, let us remind: difficulty of research of venture entrepreneurship development of the majority of post-Soviet countries because of weak development of venture entrepreneurship predetermines the necessity of research of venture investment development in the countries – world leaders in the use of venture capital, namely – in countries of Western Europe (Great Britain) and the USA. The principal strategies which are used by venture capitalists when investing means in innovative enterprises, are: strategic alliances with foreign enterprises; co-investments abroad with local investors; merger of the innovative enterprises in one's own country; creation of partnership abroad; investment in R&D in one's own country with the shift of production abroad; investing in foreign enterprises with carrying out certain operations outside of its limits, outsourcing. The basic motives of making foreign venture investments – quality of innovation projects, skilled management of receiving enterprises, high entrepreneurship culture, diversification of industrial and geographical risks, access to foreign outlets, low costs of operation of business, high competition in the local market.

Venture activity positively influences improvement of economic indicators of development of regions and a country as a whole. Under conditions of globalization and competition as active participants of venture business become universities – sources of scientific and innovative searches in venture activity. Global trends favor transformation of universities, traditional by functions in entrepreneurial which search for innovative opportunities change their structures organizationally for the purpose of reception of the status of entrepreneurship subjects enjoying full rights.

The current world venture capital market differs from that state in which it was before recession period of 2008-2009. Then this market just showed insignificant steps towards globalization of venture investment branch. Now the trends regarding the search for new perspective fast-growing markets and industries are different. Such branches as semiconductors and telecommunications - earlier attractive to venture capitalists are losing their positions, giving way to sphere of clean technologies and life sciences. Recession revealed new markets that have significant growth potentials and because the venture market always searches for modern breakthrough fast-growing markets, it is these branches of economy that are the most attractive to venture investors in the next years.

Kazakhstan as the state with the developed scientific and industrial potential should make maximal efforts in order that under conditions of harsh competition for investment and venture resources to create favorable conditions to attract global venture resources.

Test questions and tasks

1. What is the difficulty of venture capital market research on the post-Soviet area?
2. What basic strategies are used by venture capitalists on a global scale?
3. Name the main motives of making foreign venture investments by venture capitalists.
4. Compare the state and tendencies of development of the venture capital markets in the 21st century on a global scale.
5. Describe the branches of economy which in the beginning of the XXIst century are considered as the most perspective and rather attractive to venture investment.
6. What are the consequences of 2008 – 2010 world financial and economic crisis for venture business development in the conditions of globalization?
7. Tell about the principal companies – world leaders by volumes of R&D investments.
8. Define the largest regional centers of the venture capital concentration in the USA.
9. What industries do take leading places in venture investment portfolios of the Asian-Pacific region?
10. Reveal the contents of main principles of functioning of innovative universities. Name the main well-known innovative universities in the world.
11. Consider the connection between innovative entrepreneurial universities and venture enterprises.
12. Analyze the basic preconditions of development of university spin companies.

19. State and prospects of the venture business in Kazakhstan

In Kazakhstan, according to the data of the National Agency for Technological Development (NATD), venture financing has been functioning for more than 10 years. According to the statistics of the Uniform Registrar of Securities, in Kazakhstan 28 venture capital funds in the form of JSC «Joint-stock risk investment fund» are registered. NATD is one of the basic players in this market which throughout its activity together with both Kazakhstan and foreign investors supported 7 domestic venture capital funds.

Peculiarity of venture investment in Kazakhstan. As S. Ibraeva, PR-manager of the National Agency for Technological Development (NATD) noted in the USA – the home of venture financing - 70% of the global venture capital work, and investors are not afraid to lose a lot of money. Europe, in this sense, is pragmatic, there investors prefer smaller risk to larger profit. In Asia investors are even more reserved. «For example, the Kazakhstan funds when using the national budget to finance venture projects imply that an applicant of a project should predict initially, whether s/he can return the money back and whether the project will be unprofitable, thus, the applicant already initially is not allowed to make a mistake, but there's the rub. In Germany, for example, the venture capital funds created under the government, into forecasts of their activity losses are build by default, and for them it is a normal result» [41].

One more distinction from the local venture model consists in the form of their work. In Western countries the form of the limited partnership according to which partners with limited liability are passive investors is frequently used. «General partner» acts as the manager of a fund, who runs this partnership. This legal form allows detailing terms of management of a fund at the level of contracts, with the account of partners' wishes and allows protecting each of the partners from erroneous or incorrect actions from other partners [41].

Besides, the equity market is rather developed abroad that allows the funded start-ups to do an IPO. The lack of a well developed IPO market becomes one of the deterrents for venture investors in Kazakhstan. Summarizing, it is possible to say; that the main difference of Kazakhstan in that that there are very few applicants who are well prepared for venture investment. There a lot of good inventions, but only few are ready to receive such investments.

How often and where they invest in Kazakhstan. According to A. Muratova, director of an administrative department of “Centras” venture capital fund, from the beginning of existence of the fund in 2005 over 300 investment projects were considered

and analyzed in the perspective of sectors and regions of Kazakhstan: 18 innovation projects were completely developed and confirmed, 9 projects were invested in, 4 projects were brought to a final exit stage. During the existence of all projects of the fund more than 200 jobs were created and paid to the budget tax payments of over 300 mln. KZT».

Throughout the existence of the NATD more than 220 applications were considered: «On the average about 22 applications are considered per year. In total the NATD has funded 18 industrial and innovation projects, 13 venture funds, of which 6 are foreign and 54 design projects».

According to representatives of funds, projects in the spheres of IT, telecommunications, alternative power, nano- and biotechnologies, medicine, industrial and hi-tech branches are mostly financed.

Among successful cases of investment the NATD distinguished LLC «Agrofos-Yug» - manufacturer of phosphoric-potash and nitrogen-phosphoric-potash fertilizers out of harmful phosphorous-containing waste, LLC «Karagandinskiy Farmatsevticheskiy Complex» - experimental-industrial manufacturer of phytopreparations and LLC «KazakhstanComputerGraphics» - producer of a high-quality computer graphics and visual effects. In «Centras» distinguished the projects of manufacturing bicycles of brand «NOMAD», of «36.6» pharmaceutical network and of manufacturing wind driver generators of professor Buktukov.

What is wrong with the market. S. Kettebekov, CEO of the ICT Development Fund, thinks that the venture capital market in Kazakhstan has been formed. However its quality is doubtful so far. The large part of investors – private ones; however there are several professional companies, already having history of investments. In the IT sector, there is not a single venture fund: «There are private investment funds which deal with investments in IT projects, but only a few. In Kazakhstan there is no appropriate ecosystem yet. **The first problem in it** is imperfect legislation, but not the lack of money. The existing legislation was written for other structures; probably, at that moment there was just no demand for direct investments. Venture investments as the subsection of direct investments are going through the formation period. The legislative environment existing at present answered to that time for which it has once been created. At that time (2003) the legislation was being created for trading on the equity market. In the West there are also venture capital funds which are listed on the equity market. But mainly private funds deal with such risk investment. Nowadays in Kazakhstan there is an organizational and legal form – share society. It is to some extent similar to LLP in the American version, but there is some difference. The main shortcoming – the licence

for transactions on the securities market is required. For venture capital funds it is not quite urgent – because investments are direct.

LLP is a partnership. At that the fund proper does not need the creation of a legal entity. Simply there is the community of partners which has a fund without its own organizational and legal “shell”. Only the partnership which disposes of this fund has it. That is: there is the pool of money, raised in private. General partners in LLP dispose of this pool. It is done so because usually a venture capital firm has several funds which it can manage. There are searches for the optimal compromise between the western analogue and the existing legislation of the RK.

Two strategies are being considered. The first variant – quick launch in an existing legal shell. It will allow venture ecosystem to develop at least to some extent. The second variant – serious changes meaning creation of new, special organizational and legal entity. But creation of a new type of legal entity is a long procedure. If to draw an analogy, LLCs in the USA have been existing already for over 20 years, and their recognition took about 15 years. Though, there the legislation is different – case law, therefore the American investors were concerned about that that LLC does not give the same protection as Inc. does. If to look at such giants as, for example, Los-AngelesTimes – it is LLC. And LLC is possible to create for US\$ 100 and 20 minutes.

For the present this lack of legislation restrains venture capital fund establishment. Mutual funds are created for trading on the equity market, but the majority of venture funds do not operate on it.

Second problem - investment culture: there are cases when a start-up gets a small share, or too much money is given at once that puts this project at risk. The reason is, if one investor’s share at an initial stage is too large, this project becomes uninteresting at the subsequent rounds of financing.

Third problem - «not quite ripe» entrepreneur: There are a lot of problems connected with entrepreneurs; the problem of ignorance of the market, global one is especially notable. Therefore the majority of proposed solutions is limited by one city or the Republic of Kazakhstan. For example, IT market is of global nature, and unreasoned projects are practically doomed, because they do not meet global competition.

The ICT Development Fund’s CEO is sure, that the market can develop properly only globally: «But now it is necessary make an emphasis on the Customs Union area where there is still a set of unstudied niches. One should not forget about the domestic market as well where the industries at the intersection with IT are in demand: oil and gas industry, mining and smelting branch, logistics, medicine, agriculture etc. These solutions should correspond to global quality» [133].

Let us note four key methods of solution of problems of the market by S. Kettebekov [41].

First, training programs, both for investors and entrepreneurs will assist in solution of these problems, at that it is important that they are drawn up by private structures.

Secondly, creation and advancement of branch venture funds is necessary.

Thirdly, funds support instruments are necessary.

Fourthly, it is necessary to finish the legislation.

The Kazakhstan venture capital funds, as well as foreign ones operating in the RK, are presented in Appendix 1.

The program of venture capital funds in the RK by the JSC NATD is given in Appendix 2.

Test questions and tasks

1. How long have venture capital funds been operating in the RK?
2. What is the peculiarity of venture investment in Kazakhstan?
3. How often and where do they invest in Kazakhstan?
4. What are the problems of venture investment in Kazakhstan?
5. Describe the Kazakhstan venture capital funds.
6. Describe the foreign venture capital funds operating in the RK.
7. Describe the program of venture investment in Kazakhstan by the JSC NATD.

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Kazakhstan venture capital funds

The National Innovation Fund (NIF) develops a venture infrastructure in Kazakhstan: the fund is a partner in six venture funds of Kazakhstan created together with local investors on principles of public–private partnership. The share of the NIF in Kazakhstan venture funds - up to 49%. The investment policy of the given funds is directed on search and attraction of projects in the areas of ICT, new construction materials, pharmaceuticals and other prospective branches having an export potential.

Name	JSC “Hi-tech fund Areket”	JSC “Venture fund Advant”	Incorporated investment fund of venture investment “Venture fund Centras”	JSC “Venture fund Glotur Technology Fund”	JSC "Almaty venture capital"	JSC "Logycom perspective innovations"
Addresses /contacts	Almaty, Khusainov st., 281 Ph.: +7 (727) 299 10 50, 299 10 77 Fax: +7 (727) 299 10 25 E-mail: n_boranbayev@tas.kz	Almaty, Dostyk av. 172, 7 floor, office 7-3 Ph.: +7 (727) 261 90 90 (int. 5237, 5246) E-mail: Sandzhar.zhunusov@lancasterholding.com	Almaty, Manas st., 32A, Business center "SAT", 2 floor, office 204 Ph.:+7 (727)311 1111 (int. 119) Fax:+7 (727) 237 84 78 E-mail: A.muratova@centras.kz	Almaty, Kok-Tobe microdistrict, Azerbaev st., 1”b” Ph.: +7 (727) 298 05 66; 298 08 76 (int. 2602) Fax: +7 (727) 259 88 81 E-mail: projects@glotur.kz, vladimir.yessikov@glotur.kz	Almaty, Manas st./Dzhandosov 34a/8a Business center “Almaty”, office 305 Ph.: + 7 (727) 244 51 35, 244 43 33 (int. 3026) E-mail: aimanflTjaim.kz	Almaty, Aral st., 8 Ph: + 7 (727) 227 58 22 {int. 1287/1279) Fax: + 7 (727) 278 54 78 www.logycom.kz
Date of establishment	2004	2004	2005		2005	2007

Partner	JSC "TuranAlem Securities"	JSC "Lancaster Group Kazakhstan"	JSC "Centras Capital Group"			JSC "Logycom"
Management company	JSC "TuranAlem Securities"	JSC "Lancaster Invest"	JSC "Centras Securities"	JSC "Glotur Invest"	JSC "Almaty Investment Management"	JSC "Seven Rivers Capital"
Type of fund	All-purpose	All-purpose	All-purpose	Specialized fund: IT, electronics, telecommunications	All-purpose	
Authorized capital	540 mln. KZT	2.7 bln. KZT	2.6 bln. KZT	2.6 bln. KZT	2.6 bln. KZT	2.4 bln. KZT
Share of NIF	264.6 mln. KZT	1.2 bln. KZT	1.3 bln. KZT	1.3 bln. KZT	1.2 bln. KZT	1.2 bln. KZT
Projects at financing stage	LLP "Karatal Agro Tech", JSC "Basalt-Technology"	JSC "G-media", JSC "NIIT Futurtech", LLP "Global New Life"	LLP "Domikom", LLC "Inventum", LLC "Sans Novat", LLC "Digital technology center", LLC "ZU Technology", LLP "Merida-KZ", LLC "New chemical and metallurgical technologies"	LLC "Glotur Production"	JSC "Corporation AYTUMAR", LLP "Zhana Tas-Kapchagay"	

Foreign venture capital funds

The strategic objective of creation of joint venture capital funds consists in getting access to advanced Western technologies for their subsequent transfer to Kazakhstan.

The purpose of creation of joint venture capital funds is also excellent possibility to access the leading technological companies of the world. 1 lain principle - it is construction of an open system of exchange of knowledge, experience and technologies. Working with leading venture capital funds of the world, we aspire to attract not only a financial capital of foreign investors, but also to create the entire network of cooperation with high-tech companies and to open new possibilities for Kazakhstan science.

The fund is a partner in five leading foreign venture capital funds covering the countries of Europe. The USA, Israel, Southeast Asia.

Name	Authorized capital is equal to	Share of NIF, amount equal to	Number of companies at financing stage
Wellington Partners III Technology Fund L.P.	150 mln. Euro	7.7 mln. Euro	19 companies, in the areas of IT, nanotechnologies
Central Asia Small Enterprise Fund "CASEF, LLC."	US\$ 4.2 mln.	US\$ 2 mln.	4 companies in the sphere of retail services and food production
Flagship Ventures Fund, L.P.	US\$ 151 mln.	US\$ 10 mln.	15 companies in the areas of IT, medicine
Mayban Jaic Asian Fund	US\$ 40 mln.	US\$ 5 mln.	8 companies in business and high tech sectors
Venture capital fund Vertex III Fund L.P.	US\$ 126.5 mln.	US\$ 5 mln.	21 companies in the areas of IT, RES

Program of venture investment in Kazakhstan by the JSC NATD (The National Agency for Technological Development)

1. Statement of the program essence (name, who implements, what is got by participants of the program):

Participation in the program of venture financing will allow creating a joint investment company together with the government - venture capital fund. The purpose of a similar fund - to develop innovation projects having possibility of fast growth. The venture fund is different in that that it backs projects with a high degree of risk and possibility to get profit in a short period of time.

Conditions of participation in the program: investments of the agency in one venture fund should not exceed 49% of a project cost, with the term of participation in the project up to 7 years. Maximum amount – 1 295 mln. KZT / 6.77 mln. Euro

Project operator: JSC National Agency for Technological Development

2. Who can/cannot take part in the program.

2.1. Who can:

As initiators of investment fund establishment can be as the agency as other legal entities - both residents and nonresidents of the RK. The project proposal also can be a co-initiative of the parties - potential founders of an investment fund.

2.2. Who cannot:

As initiators cannot be legal entities which are being liquidated, recognized as insolvent (bankrupt), whose property is arrested and (or) which economic activities are suspended.

3. How to participate in the program – step-by-step instruction with the list of necessary documents with examples of filling, contacts.

3.1. Procedure for creation of an investment fund (IF):

– You submit an application to the NATD (address to the Center of investment projects and monitoring, ph.: 8 (7172) 571012 internal 214 Fax: 517-021E-mail: info@natd.gov.kz)

- agency carries out an internal examination of documents (60 calendar days);
- investment committee makes a decision about your project (3 working days);

- You register the venture capital fund;
- Board of Directors of the NATD makes a decision during 10 working days);
- Management of the NATD decides (2 working days).

3.2. List of documents required for the creation of an investment fund (IF):

· The project proposal is drawn up in a free form. It contains information reflecting the strategic concept of creation and development of the fund:

- goals and objectives;
- direction of activities;
- IF forms of investment;
- IF amount of capital, sources of its formation (size of the initiator's share, capital formation scheme);
- IF organizational and legal form;
- IF organizational and legal form;
- proposal for the selection of a management company, for interaction with it;
- form of fund management, proposal for the selection of a management company;
- time horizon of IF activities;
- investment policy principles (branch direction, project requirements);
- data about projects planned to be considered for financing;
- conditions of investors' (shareholders, participants) exit the investment fund.
- Charter and memorandum of association between IF and Kazakh partner (IF founder) -for existing investment funds;
- Certificate of state registration and IF statistical card, TRN (notarized) and of Kazakhstan partner - for existing IFs;
- IF financial documents (official reporting forms) for the last three years and Kazakhstan partner - for existing IFs;
- IF presentation (extended information about the company, including detailed information about the heads, experience of management, company history, information about current and planned projects);
- Founding, financial documents and presentation of the proposed management company - for existing IFs.

4. Conditions for early termination of participation in the program. Responsibility of program participants.

The decision to refuse the establishment of the fund will be made in the following cases:

- detection of inconsistencies of the submitted documents;
- negative opinion of an independent expert examination;
- provision of false information by the applicant.

One can become familiar with the terms and conditions, mechanisms of participation and list of required documents with examples of filling, in the «Regulations for establishment and monitoring of investment funds of by JSC NATD» from August 29, 2012.

5. Program statistics (total number of participants since its launch, the number of completed projects, amount of cash disbursements, total economic impact, statistics of participants by regions and size of companies (small/medium/large business)).

Throughout its activity JSC "NATD" took part in the establishment of 7 Kazakhstan venture capital funds (18 innovative projects backed) and capitalization of 7 foreign venture funds.

In 2010, the Fund successfully exited two domestic venture funds «Advant» and «Almaty Venture Capital» with a total gain of 58.2 mln. KZT.

At present, the NATD is a partner of 4 domestic venture capital funds in Kazakhstan. They have been established together with local investors on principles of public–private partnership: JSC «JSIFRI «Venture fund «Centras», JSC «JSIFRI «Venture fund «Delta Technology Fund», JSC «High Technology Fund «Areket» and JSC «Logycom perspective innovations».

Total number of participants since the launch of the program, broken down by regions and branches	Total number of completed and being under consideration by regions and branches	The amount of funds planned and actually disbursed
Domestic venture funds have backed 18 innovation projects	4 innovation projects have been completed altogether	18 innovation projects have been

<p>By regions:</p> <ul style="list-style-type: none"> - Almaty oblast 2; - Karaganda 3; - Pavlodar 1; - Almaty City 12 	<p>By branches:</p> <ul style="list-style-type: none"> - Mechanical engineering, instrument making 4; - AIC 3; - RES 1; - ICT 2; - MMC 1; - Construction industry 3; - Medicine, pharm. industry 1; - Power engineering 1; - Chemical, petrochemical 1; - Other 4 	<p>By regions:</p> <ul style="list-style-type: none"> - Almaty City 4 	<p>By branches:</p> <ul style="list-style-type: none"> - ICT 1; - MMC 1; - Construction industry 2 	<p>backed altogether for a total amount of 1.9 bln. KZT of which 4 projects completed to the sum of 60 mln. KZT</p>
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**MODEL AGREEMENT BETWEEN VENTURE FUNDS AND
INNOVATIVE COMPANY**

MEMORANDUM OF PRINCIPAL TERMS

1. Amount of investments
2. 2. Type of securities: convertible Series A preferred stock
3. Price per share
4. Pre-investment evaluation of the project is of US\$ 1.5 mln.
5. Distribution of shares:

Preferred – 40%

Founders' shares – 35%

Management shares – 25%

6. Completion of the Signing of the Agreement: until March 15, 2016

7. Dividends:

7.5 percent interest rate per share annually. Common stock dividends are not paid, except for Series A shares

8. Liquidation Preference:

Return: the nominal price per share and accrued but unpaid dividends. Participation in the distribution of property remained on terms of a contract along with the common stock. Merger or sale is considered dissolution.

9. Conversion Rights:

Each Series A share can be converted upon request at any time into 1 ordinary share. Automatically converted if there is a decision of 2/3 of preferred stock holders. Automatic conversion is made upon an external request at the price 3 times exceeding an acquisition price of preference shares if at least US\$ 5 mln. were attracted.

10. Payment:

by request of investor between 5th and 7th years at the initial price + 6% accrued annually + accrued and unpaid dividends.

11. Protective Provisions:

Proportional regulation distribution of dividends, reinvestment and so forth.

12. Voting Rights:

the same for holders of any shares. Holders of Series A shares can elect the majority of board of directors only in case of

- failure to fulfill agreement on the payment of dividends for 2 years;
- failure to meet payment obligations;
- loss of US\$ 25 tsd. and more;
- net company value dropped below US\$ 2 mln.

13. Registration Rights:

Expenses paid by Company:

- approval for the merger or sale of all or part of the assets of the Company;
- approval of any liquidation of the company;
- approval of sale or reinvestment in another company.

14. Right of First Refusal:

- holders of preferred stock will have the right to a proportional increase in their percent in the company without special preferences from any subsequent offering by a holder of shares;

- holders of preferred stock will have the right of first refusal with respect to any shares of employees which will be decided to sell to the third party. These rights prevail during IPO.

15. Information Rights:

- assets which will be subject to audit during 90 days, and those which have not passed through this procedure shall be final for the balance of the budget in the period up to 30 days to the end of the quarter. Annually the budget should be balanced to the beginning of each fiscal year;

- all other reports prepared only for company management;
- inspection rights – not more often, than once a month.

16. Board of Directors:

- the Board shall consist of five members. Holders of Series A shares have the right to elect two members of the Board. Management elects two members as well.

17. Restrictions on Transfer:

- all holders of common stock of the company being its employees, should approve the restrictions on transfer.

18. Particular provisions:

- company must insure its key employees (a policy shall be held by holders of the preferred shares);

- founders' shares can be sold after five years at par value in accordance with the agreement.

19. The company should carry out expenses according to the arrangement with holders of preferred stock regarding certain amounts. Expenses which will exceed the given amounts, are object for discussion by holders of preferred stock and the company.

Educational edition

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VENTURING

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