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# БАЯНДАМАЛАРЫ

## ДОКЛАДЫ

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## **CURRENT STATUS AND PROSPECTS FOR THE DEVELOPMENT OF VENTURE FINANCING**

**Abstract.** In modern conditions, entrepreneurs directly initiating new projects, large industrial companies, and the state clearly realize that a refusal to invest in the development of innovations would mean in practice much greater financial losses. Therefore, they are following the path of creating economic mechanisms that, on the one hand, would facilitate the introduction of the latest achievements of scientific and technological progress into production, and on the other, would allow to minimize the financial risk of individual investors.

One of such mechanisms is venture (risk) financing of innovations. The venture mechanism has played an important role in the implementation of many of the largest innovations in various fields of activity.

At the present stage of development in the context of globalization, the economic situation of countries is increasingly dependent on the level of innovation. If several centuries ago the power of state power was determined by gold reserves, land fertility and mineral resources, in the 21st century the level of development of science and technology in the economic sector began to play an increasingly important role.

As one of the reasons for limiting the volume of innovation, it is customary to attribute a lack of investment. The experience of economically developed countries shows that the development of innovative financing mechanisms from various sources (government, corporations) can solve the problem of insufficient investment.

Venture financing is one of the possible mechanisms to support innovative companies. The example of Silicon Valley in California, USA, serves as a vivid example of how the formation of innovative companies in the region was largely ensured by the parallel development of venture capitalism - venture capital funds and frequent investors.

The development of venture financing in Kazakhstan is considered one of the priority vectors of state innovation development, which contributes to the intensification of innovative activity and increase the competitiveness of the country's economy. The development of venture financing and venture entrepreneurship can solve a whole range of tasks that are strategically important for the implementation of positive qualitative changes in the economy. Firstly, this means an additional influx of investments, including from abroad. Secondly, there is an opportunity to revive and significantly intensify the national innovative potential, gradually turning it into the main “locomotive” of the development of the domestic economy, expanding its tax and export base. Thirdly, there will be a rapprochement between the Kazakhstani and international business environment on the basis of the most modern forms and directions of economic activity, interaction with direct developers of innovative products. With venture capital, domestic entrepreneurs receive not only Western money, but also advanced managerial experience and extensive business contacts necessary for the international commercialization of their own technological developments, while maintaining control over the company in their hands.

**Key words:** Venture financing, state, corporations, venture mechanism, innovative companies.

**Introduction.** Few people know, but venture financing in our country began to develop more than 10 years ago. The venture financing system traditionally includes investments of so-called “business angels” (individuals or investment companies investing in risky, but potentially highly profitable projects) in innovative startup projects, in addition, crowdfunding or crowdfunding are becoming more widespread in Kazakhstan, as well as venture capital funds investments in existing projects.

Recently, however, more and more analysts and experts have been asking the question: how effective is this area of investment activity?

We begin our analysis with the investment environment. Kazakhstan pays special attention to creating a favorable business climate for investors and improving the conditions for doing business. In the DoingBusiness 2018 World Bank rating, our country took 28th position, having improved its performance by 8 points compared to 2017. Today, Kazakhstan is a regional leader in the amount of foreign capital invested in the economy. So, over the past decade, the volume of direct investments attracted exceeded their net outflow, while investment funds were mainly attracted through debt instruments.

In his Address to the people of Kazakhstan, “New Development Opportunities under the Fourth Industrial Revolution,” the first president N.A. Nazarbayev said that “the most important issue is the development of our own ecosystem of developers of digital and other innovative solutions. “The main factors for the success of the innovation ecosystem are the stimulation of demand for new technologies from the real sector and the functioning of the private venture financing market. To do this, relevant legislation is needed.” As a result, the Concept of the draft Law “On Amendments and Additions to Some Legislative Acts on Venture Financing Issues” was developed.

In general, the era of venture financing in Kazakhstan began in 2003-2004 with the creation of the National Innovation Fund (today it is the National Agency for Technological Development - NATD), whose main goal is to promote innovation through grant financing and direct investment. Priority areas for granting NATD grants: info-communication technologies, biotechnologies, energy efficiency, robotics.

Also among the venture capital funds is the Samruk-Kazyna National Welfare Fund. One of the new \$ 100 million funds, SingulariTeam, is investing in artificial intelligence and robotics. Another venture fund - Centras (established by the Centras financial group and the National Innovation Fund of Kazakhstan) - specializes in fintech. The fund is one of the leaders in the Kazakhstan venture market, with an average of 15 projects in its portfolio.

Today, the total volume of venture capital in Kazakhstan is 260 million US dollars, investments of the National Innovation Fund in foreign funds - about 40 million dollars. The state program for the formation of the national innovation system of the Republic of Kazakhstan provides for investment in information technology and Internet business at the expense of venture capital funds.

So, in the republic, the Alatau IT City Information Technology Park was opened as a platform for the development of IT business, 3 regional technology parks were created, venture funds were established with the participation of domestic and foreign investors, the first innovative managers appeared.

However, over 5 years, all Kazakhstan venture funds have organized ... only 12-15 transactions, while for each fund to be effectively utilized, each of them had to complete 10 transactions. At the same time, the average investment amount per project is equal to \$ 2.5 million, while in the first quarter of 2018, European companies received international investment capital of 4.9 billion euros.

According to The Financial Times Limited, in 2018, by agreement of the European Commission and the European Investment Fund, it was decided to invest 410 million euros to finance a new program known as Venture EU. Investments in Sweden, the UK, and Norway account for more than 0.5% of GDP, the average European indicator is 0.3%.

Thus, analyzing the current state of venture financing in Kazakhstan, we have to admit that it is at the initial stage of formation. One of the factors restraining the development of venture financing is the shallow stock market capacity, in contrast to Western countries, where the growth dynamics of venture funds is also associated with the development of the stock market. Often, venture capital investments in a particular project at more mature stages of the project are realized through an IPO (initial public offering). The simplicity of the withdrawal procedure is an important advantage that determines the interest of venture funds / investors [1].

In terms of accessibility of venture capital, Kazakhstan ranks 102nd in the ranking of the global competitiveness index. Despite the fact that the domestic history of venture capital business has more than ten years, the risk financing infrastructure that has developed over the years, consisting of one state-owned company, 20 private venture capital funds and a dozen business angels, practically does not stimulate the development of innovation in the economy of the Republic of Kazakhstan [2].

Baiterek National Management Holding JSC held a session in the framework of the 12th Astana Economic Forum (AEF-2019) to discuss the role of the state in the development of venture capital. Based on successful international experience, Kazakhstan is taking an important step towards the development of

its innovative ecosystem and international competitiveness by launching its first venture capital fund - QazTechVentures JSC [3].

In February 2019, QazTechVentures JSC was established to promote the development of technology entrepreneurship through tools for venture financing, business incubation and technology consulting. QazTechVentures is a part of Baiterek National Management Holding JSC [4].

The subsidiary company Baiterek National Management Holding JSC, QazTechVentures JSC, is attracting venture investments to Kazakhstan by signing a preliminary agreement on creating a joint fund with the American venture investment fund. The fund will have a capitalization of US \$ 150 million, the main investments will be made in the most successful startups that have previously received money from regional or global 500 Startups funds.

The fund plans to invest 35% of capital in companies from the USA and 65% in companies selected from around the world. It is assumed that the priority sectors for investment will be projects of IT, e-commerce, fintech, mining and metallurgical complex, agricultural sector, logistics and others.

The creation of a joint fund and cooperation with 500 Startups can be an important catalyst for the development of venture capital in Kazakhstan, as it will integrate into the global ecosystem and will help scale up domestic startups in the world market and attract foreign investment in the country.

500 Startups is one of the leading US venture capital management companies established in 2010 in Silicon Valley. Over the nine years of operation, the company has created 19 funds, of which 4 are global, investing in startup projects around the world, and 15 are thematic, focused on individual regions of the world. So, the thematic funds “500 Startups” invest in Singapore, Thailand, Vietnam, South Korea, Japan, Israel, the Middle East, Turkey, Brazil, Mexico, Canada and other countries.

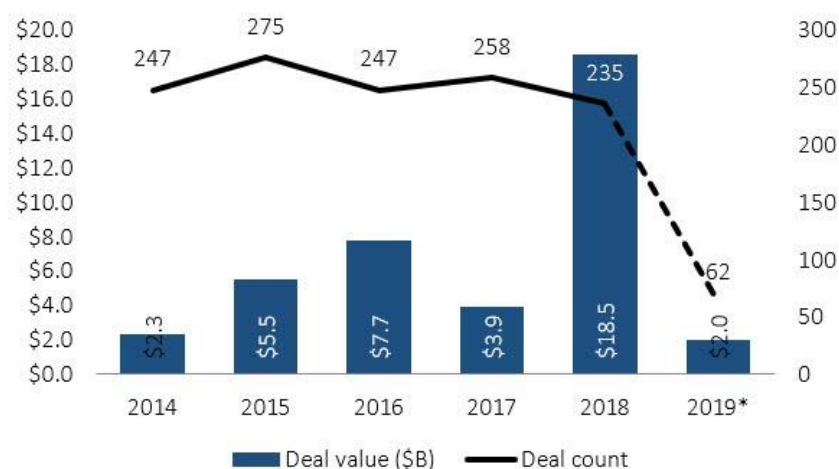
According to its strategy, Baiterek holding plays an active role in attracting foreign funding to support investment projects in Kazakhstan. The holding may assist in providing certain benefits for American companies wishing to work in the Kazakhstan market. In particular, a great interest is in attracting long-term investments in infrastructure and industrial projects [5].

**Methods.** Methods used are general scientific and special, such as: system analysis method; content analysis method; comparative analysis method; method of analysis and synthesis; method of systematic approach.

**Results.** Venture investments in the payment solutions market jumped 5 times.

In 2018, the volume of venture financing in the global payment solutions market reached \$ 18.5 billion, an increase of almost 5 times compared to 2017. Such data was released on May 28, 2019 by the analytical company PitchBook.

Although companies, one way or another connected with financial technologies, began to attract much more funds, the number of venture transactions decreased from 258 in 2017 to 235 a year later.



Source: Pitchbook

Figure 1 – The volume of transactions on venture financing payment startups, data from PitchBook

The surge in investor activity in the field of online payments is associated with the Chinese company AntFinancialServicesGroup, which in 2018 raised a record \$ 14 billion.

From the beginning of 2019 to the end of May, 62 transactions were registered (in the amount of \$ 2 billion) for venture financing of startups, whose business relates to payments and transfers via the Internet. In January, Stripe, a company developing a payroll and anti-fraud service, raised a total of \$ 345 million and received a valuation of \$ 22.5 billion.

GoCardless company, creating a global network of interbank payments, received \$ 75 million in investments, including from Alphabet and Salesforce, while startup Klarna, which offers online store users to pay for goods after testing the goods, closed the \$ 100 million round of financing in 2019.

According to CNBC TV channel, in the payment industry there are more and more services and developers who want to capitalize on the fact that more and more people prefer to make purchases online and using contactless technologies. McKinsey analysts estimated the size of this market at \$ 1.9 trillion in 2018 [6].

CB Insights: 2,740 transactions for \$ 53 billion. At the end of 2018, corporate venture capital structures financed 2,740 transactions, and their total investments approached \$ 53 billion. Global activity of corporate venture is growing rapidly, and Asian companies are claiming more and more confidence, promising oust traditional North American leaders. At the same time, not only Asian corporate foundations are ready to take the main positions, but also start-ups from this region who manage to raise ever higher investment rounds. So, in 2018, the largest funding volume, \$ 1.9 billion, including from SoftbankGroup and CapitalG, was received by the Chinese platform for truck rental ManbangGroup. These conclusions came from a profile study by analysts at the American company CB Insights [7].

The Chinese market has also become the champion of the Asian region for attracted investments from corporate venture. Namely: in 2018, the Asian region accounted for 38% of all transactions involving corporate venture capital.

According to the CB Insights report, financing for Chinese startups increased by 51% to \$ 10.8 billion, and the number of transactions increased by 54% to 351. For comparison, financing for startups in Japan, although it increased by 56%, however, it amounted to 2018 g. only \$ 1.4 billion. The largest deal for the market was the \$ 63 million investment received by Folio's capital management platform. Corporate venture capital investments in Indian startups also remained small compared with China - the number of transactions increased by 20%, from 59 to 71, and the volume of investments amounted to \$ 1.8 billion. The largest deal for the market was the investment of Japanese SoftBank structures (\$ 1 billion) in Indian hotel chain OyoRooms.

Still, US funds still maintain leadership in the corporate venture investment market - the total volume of transactions in 2018 increased by 28%, from \$ 20.7 billion to \$ 26.5 billion, and the number of transactions increased from 945 to 1046 (an increase of 11%).

Fintech attracted a record investment of \$ 39.57 billion. At the end of January 2019, the results of the CB Insights study were published, according to which, according to the results of 2018, financial and technological companies from around the world raised a record venture capital of \$ 39.57 billion, which is 120 % more than a year ago [8-10].

Every 4 days, a startup worth more than \$ 1 billion appears in China. At the end of January 2019, the Hong Kong research company HurunReport published a report saying that almost every four days a so-called "unicorn" appears in China - a startup with a market capitalization of \$ 1 or more billion.

The volume of venture investments in Europe was a record, but the number of transactions decreased by a quarter. At the end of January 2019, as part of the annual European PitchBook report, data were published according to which 2018 was the record year for the size of venture investments in Europe, although the total number of transactions decreased by more than a quarter. In 2018, a total of \$ 23.3 billion was invested in 3384 transactions, which is 4.2% more than a year earlier. But the total number of transactions fell by 25.9% [11-13].

The highest level of venture financing since 2000. At the beginning of January 2019, PwC and CB Insights analysts published a report according to which the highest level of venture financing was observed in 2018 from 2000 - the last year of the dotcom bubble.

During 2018, \$ 207 billion was invested in 14,247 transactions worldwide, which is 21% more than in 2017. Total US funding for the year increased by 30% to \$ 99.5 billion for 5536 deals. During the year, about 382 funding funds (including 184 in the United States) amounted to more than \$ 100 million, while in 2017 their number amounted to only 266.



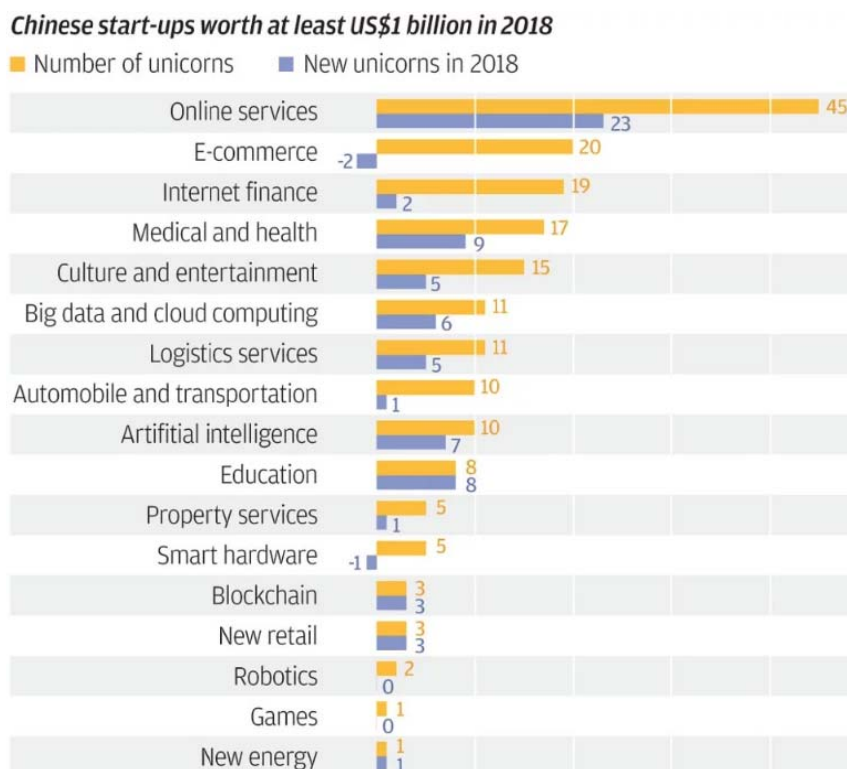


Figure 2 – Areas where companies with the most value of \$ 1 billion or more appeared in China, Hurun Report data for 2018

In the USA, in 2018, 53 new companies reached the level of attracted venture capital of \$ 1 billion or more, while in 2017 there were 29. In the fourth quarter alone, 21 such companies were registered - the highest figure in history.

Venture capital investment in 2018 was a record for 18 years.

The investments were received mainly by companies in the field of artificial intelligence, digital healthcare and financial technologies, while financing related to artificial intelligence grew by 72% to \$ 9.3 billion. At the same time, venture financing in the San Francisco region jumped by 55%, to \$ 28 billion, and financing in New York reached \$ 13 billion.

Despite record numbers, in the fourth quarter the number of transactions decreased worldwide, with the exception of Asia, where activity continued to grow. In 2018, compared with 2017, investments in venture capital in Asia increased by 42%, and the amount of invested funds increased by 11%. Asia broke records in all areas: the share of financing funds of \$ 100 million and more grew by 35% (to 162), and the share of new companies with investments of more than \$ 1 billion increased by 60% (40 companies were opened) [14-16].

For the first time, China has become a leader in startup investment. In the second quarter of 2018, China for the first time surpassed North America in the amount of venture capital, which was facilitated by a record \$ 14 billion fundraising campaign by AntFinancialServicesGroup, a company specializing in the development of financial technologies.

According to the Crunchbase portal, which tracks and analyzes data on collected funds, in April, May and June 2018, China received 47% of the world's venture capital, while the United States and Canada were able to raise 35% of the funds. Some economists even believe that Crunchbase in its report underestimated the volume of investments in China, since it only tracked relatively large investments.

This surge in investor interest in China may be due to record investments in AntFinancialServices. The fundraising was attended by new investors, including Singaporean venture capital funds GIC and TemasekHoldings, US private firms WarburgPincus and SilverLake, as well as private Chinese shareholders who supported the issuance of securities [17-21].

Venture capital investments over the past 40 years have become very popular in all developed countries of the world. But the United States became the cradle of this type of business - a country where

25% of all venture capital on the planet is concentrated. The high-tech market in the USA is the most boiling and most developed in the world. It is not surprising that venture capital investments as a phenomenon originated in this country, and to this day they have the greatest success. Today in the United States there are more than 1,600 venture funds, and the ecosystem of the venture capital market includes thousands of enterprises with tens of thousands of employees.

Features of venture investment in the United States.

The lion's share of venture capital investors in the United States is concentrated in San Francisco, where the famous Silicon, or rather Silicon Valley, is located. High-tech startups here appear like mushrooms after the rain, so local investors have long since worked out for themselves universal rules for venture capital investments. The first stage of venture investments is the pre-seed stage (Pre-Seed), which involves companies that have at least some evidence of potential interest in its product from future customers. At this stage, the average check is about \$ 250 thousand, and the funds raised during the pre-sowing stage are used to create the so-called. MVP (minimum viable product version). The main investors at this stage are the founders of the company themselves or business angels.

The next seed stage (Seed) involves companies that already have an MVP and at least an initial customer base. In this round, the average investment check can range from \$ 500 thousand to \$ 3 million, and the main participants can be not only business angels, but also seed funds or venture accelerators. The company uses the funds received in order to provide scalability of the product and increase sales. Often, the amount of investment is enough for a year and a half, after which the fate of the startup becomes more or less clear, since you can already see whether it is starting to become popular with the target audience or not.

The most important stage of venture capital investment in the USA is usually the late sowing stage (Post-Seed) or the growth stage. It involves companies that have already been able to demonstrate their effectiveness, but which lack the funds to further develop the project and increase profits. At the growth stage, companies can attract venture capital investments in several rounds (A, B or C) and at each of them the average check amount increases significantly. Amounts on round A are usually \$ 5-10 million, on round B \$ 10-20 million, and on round C, the average check can reach \$ 100 million, and in some cases even more. The amounts collected in each of the rounds are used to expand the customer base, expand to other regions or new markets, and further increase profits. If such projects are successful, after 3-5 years they begin to bring billions in profits to their investors, as happened with companies such as Twitter, Instagram, Facebook and many others.

Analyzing the current state of venture financing in Kazakhstan, we have to admit that it is at the initial stage of formation. One of the factors restraining the development of venture financing is the shallow stock market capacity, in contrast to Western countries, where the growth dynamics of venture funds is also associated with the development of the stock market.

Problems and disadvantages of the current state of venture financing in Kazakhstan:

1) The lack of measures and mechanisms of state incentives, such as: tax preferences and subsidies, the absence of state guarantee programs and co-financing for venture projects directly or through state development institutions, investment agencies or insurance organizations.

2) Imperfection of the legislative framework that does not allow building various ways and forms of investment, project management, lack of reliable protection tools to reduce the entrepreneurial risks of investors.

**Discussions.** Thus, the possibilities of beginning businessmen and start-ups in raising funds at the first stage are quite limited. This also applies to government programs aimed at developing the startup industry.

Another difficulty is the lack of a critical mass of quality projects.

According to the data of the international startup platform StartupBlink, in Kazakhstan there are only 27 projects. At the same time, Kazakhstan occupies 71st place among 197 countries in the global ranking of ecosystems. The most popular projects are Iris, Singularity Lab and Hexlet. The most active industries are education, mobile services and real estate. This suggests that we need to open up, tell that we have projects, startups that have managed to raise funds, and not only local investors.

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### ВЕНЧУРЛІК ҚАРЖЫЛАНДЫРУДЫҢ ҚАЗІРГІ КЕЗДЕГІ ЖАҒДАЙЫН ТАЛДАУ ЖӘНЕ ДАМУЫНДАҒЫ ПЕРСПЕКТИВАЛАРЫ

**Аннотация.** Қазіргі жағдайда жаңа жобаларды тікелей бастаған кәсіпкерлер де, ірі өнеркәсіптік компаниялар да, мемлекет инновацияларды дамытуға инвестиция салудан бас тарту іс жүзінде айтарлықтай қаржылық шығындар әкелетінін түсінеді. Сондықтан, олар бір жағынан ғылыми-техникалық прогрестің жаңа жетістіктерін өндіріске енгізуге ықпал ететін, екінші жағынан жеке инвесторлардың қаржылық тәуекелін азайтуға мүмкіндік беретін экономикалық тетіктерді құру жолымен жүруде.

Осындай тетіктердің бірі инновацияларды венчурлық (тәуекелді) қаржыландыру болып табылады. Венчурлік механизм әр түрлі қызмет салаларында көптеген ірі инновацияларды жүзеге асыруда маңызды рөл атқарды.

Жаһандану жағдайындағы дамудың қазіргі кезеңінде елдердің экономикалық жағдайы инновация деңгейіне байланысты. Егер бірнеше ғасыр бұрын мемлекеттік биліктің күші алтын қорымен, жер құнарлығымен және минералды ресурстармен анықталса, ХХІ ғасырда экономика саласындағы ғылым мен техниканың даму деңгейі маңызды рөлге ие бола бастады.

Инновациялар көлемін шектеу себептерінің бірі ретінде инвестицияның жетіспеушілігін атауға болады. Экономикалық дамыған елдердің тәжірибесі әр түрлі көздерден (үкімет, корпорациялар) қаржыландырудың инновациялық тетіктерін дамыту жеткіліксіз инвестиция мәселесін шеше алатындығын көрсетеді.

Венчурлық қаржыландыру инновациялық компанияларды қолдаудың мүмкін механизмдерінің бірі болып табылады. Калифорниядағы (АҚШ) Силикон алқабының мысалы аймақтағы инновациялық компаниялардың құрылуы венчурлік капитализмнің – венчурлық қорлардың және жиі инвесторлардың қатарлас дамуымен қамтамасыз етілгендігінің жарқын мысалы болып табылады.

Қазақстанда венчурлік қаржыландыруды дамыту мемлекеттік инновациялық дамудың басым бағыттарының бірі болып саналады, бұл инновацияны ынталандыруға және ел экономикасының бәсекеге қабілеттілігін арттыруға көмектеседі. Венчурлік қаржыландыру мен венчурлік кәсіпкерлікті дамыту экономикада жағымды сапалық өзгерістер жасау үшін стратегиялық маңызды міндеттердің барлығын шеше алады. Біріншіден, бұл инвестициялардың қосымша ағынын, оның ішінде шетелден келетіндігін білдіреді. Екіншіден, ұлттық инновациялық әлеуетті жандандырып, едәуір жандандыруға, оны біртіндеп отандық экономиканың негізгі «локомотивіне» айналдырып, оның салықтық және экспорттық базасын кеңейтуге мүмкіндік бар. Үшіншіден, экономикалық қызметтің неғұрлым заманауи нысандары мен бағыттары, инновациялық өнімдерді тікелей жасаушылармен өзара іс-қимыл негізінде қазақстандық және халықаралық іскерлік орта арасында жақындасу болады. Венчурлық капиталымен отандық кәсіпкерлер тек батыстық ақшаны ғана емес, сонымен қатар өздерінің технологиялық әзірлемелерін халықаралық коммерцияландыруға қажет жетекші тәжірибе мен кең іскерлік байланыстарды алады, сонымен бірге олардың бақылауында болады.

**Түйін сөздер:** венчурлық қаржыландыру, мемлекет, корпорациялар, венчурлық капитал механизмі, инновациялық компаниялар.

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### АНАЛИЗ СОВРЕМЕННОГО СОСТОЯНИЯ И ПЕРСПЕКТИВЫ РАЗВИТИЯ ВЕНЧУРНОГО ФИНАНСИРОВАНИЯ

**Аннотация.** В современных условиях и предприниматели, непосредственно выступающие инициаторами новых проектов, и крупные промышленные компании, и государство отчетливо осознают, что отказ от инвестиций в освоение нововведений означал бы на практике куда большие финансовые потери. Поэтому

они идут по пути создания экономических механизмов, которые, с одной стороны, содействовали бы внедрению в производство новейших достижений научно технологических прогрессов, а с другой — позволяли бы сводить к минимуму финансовый риск отдельных инвесторов.

Одним из таких механизмов является венчурное (рисковое) финансирование нововведений. Венчурный механизм сыграл важную роль в реализации многих крупнейших нововведений в различных областях деятельности.

На современном этапе развития в условиях глобализации экономическое положение стран все в большей степени зависит от уровня инновационной деятельности. Если несколько веков назад могущество государственной власти определяли запасы золота, плодородие земель и минеральные ресурсы, то в XXI веке уровень развития науки и техники в экономическом секторе стал играть все более важную роль.

В качестве одной из причин ограничения объема инноваций принято относить отсутствие инвестиций. Опыт экономически развитых стран показывает, что разработка инновационных механизмов финансирования из разных источников (государство, корпорации) может решить проблему недостаточных инвестиций.

Венчурное финансирование – это один из возможных механизмов поддержки инновационных компаний. Пример Кремниевой долины в Калифорнии, США, служит ярким примером того, как становление инновационных компаний региона во многом было обеспечено параллельным развитием венчурного капитализма – венчурных фондов и частых инвесторов.

Развитие венчурного финансирования в Казахстане считается одним из приоритетных векторов государственного инновационного развития, которое способствует активизации инновационной деятельности и увеличению конкурентоспособности экономики страны. Развитие венчурного финансирования и венчурного предпринимательства способно решить целый комплекс задач, стратегически важных для осуществления позитивных качественных изменений в экономике. Во-первых, это означает дополнительный приток инвестиций, в том числе из-за рубежа. Во-вторых, появляется возможность реанимировать и существенно активизировать национальный инновационный потенциал, постепенно превращая его в основной «локомотив» развития отечественной экономики, расширения ее налоговой и экспортной базы. В-третьих, произойдет сближение казахстанской и международной предпринимательской среды на основе самых современных форм и направлений экономической активности, взаимодействия с непосредственными разработчиками инновационных продуктов. С венчурным капиталом отечественные предприниматели получают не только западные деньги, но и передовой управленческий опыт, и обширные деловые контакты, необходимые для международной коммерциализации собственных технологических разработок, при сохранении контроля над компанией в своих руках.

**Ключевые слова:** венчурное финансирование, государство, корпорации, венчурный механизм, инновационные компании.

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