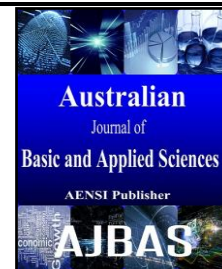




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Venture capital as a source of innovation's financing

¹RymkulIsmailova, ²AminaMussina, ³Nurgullsmagulova

¹Professor in the Department of Finance at Kazakh Agrotechnical University, Kazakhstan

²Professor, Kazakh University of Economic, Finance and International Trade, Kazakhstan

³Associate Professor in the Department of Economics at Eurasian National University, Kazakhstan

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ABSTRACT

Venture capital plays an important role in the formation of the national innovation system as a financial resource. This aspect can be explained by the state providing favorable conditions for investors, who are financing innovative business. Examples of good investment have been studied in Kazakhstan in the form of "Microsoft", "Google", "Samsung" and "LG" which have started business as small innovative companies. In Kazakhstan, the creation of venture institutions and the involvement of foreign capital in the technology innovation business were realized by the National Agency for Technological Development. There are two main forms of venture capital: corporate venture business and venture funds with state participation. Corporate venture business allows the corporation to increase the inflow of new ideas, knowledge and technology that enhances its competitiveness in the market. Therefore, corporate venture structures are usually inside large corporations. The venture funds focused on finding and investing small innovative companies with high growth potential. Certainly, Kazakhstan needed primarily venture funds, which offer the possibility of the small innovative sector development. In Kazakhstan venture financing is in the early stage of development, thus there are problems with the formation of venture infrastructure. The shortage of funds and the lack of qualified specialists for innovative companies as well as for venture capital funds are real obstacles. Venture capital plays an important role in the development of innovation in Kazakhstan. Firstly, the venture investment is aimed at the commercialization of innovations. For instance, there is the introduction of scientific results in production, the creation of new products and the evaluation of its commercial potential, initial batch production and the first sales, the expansion of production and the access to new markets. Secondly, in our country the creation of venture capital institutions should consider the background of the interactive system between science and business. Finally, Kazakhstan needs traditional venture funds, which offer the possibility to promote innovative sectorial development. In conclusion, venture funds will help to attract private capital for innovation, reduce risks and sale innovations.

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INTRODUCTION

The creation of the venture financing institutions plays an important role in the building interaction system between science and business. The world experience shows that to achieve this goal, it is required to develop a set of government's support measures and incentives, contributing to the creation of a mutually beneficial relationship between the venture capital market and science and technology sources. Therefore, the creation of the venture capital funds in Kazakhstan is entrusted to the state financial development institution of JSC "National Innovation Fund" (the NIF). It is assumed that the establishments of the venture capital funds with the NIF will help to attract the private capital to the

innovative activity. It will also reduce the risk, and form the mechanism of an effective interaction between the government and private entrepreneurship, particularly for the commercialization of innovations.

The initial share of the National Innovation Fund (the NIF) in the venture funds was 49%, while the current participation is reduced to 33%. On the one hand, it confirms the fact that private business is interested in the venture funds, since the state's support provides more opportunities for private investors to be involved in the implementation of the state program of the forced industrial-innovative development of Kazakhstan for 2010-2014 (hereinafter the Program). The funding is being provided through the acquisition of shares or

Corresponding Author: RymkulIsmailova, Professor in the Department of Finance at Kazakh Agrotechnical University, Kazakhstan
tel. +77172388739, E-mail: rymkul.kz@mail.ru

interests in companies that implement innovative projects. Upon the investment of the funds, the preference is given to complementary technologies, as well as to companies that are at various stages of the production cycle, or implementing identical products.

On the other hand, taking into consideration the fact that venture capital financing in Kazakhstan is at the initial stage, there are problems in the formation of venture infrastructure. Shortage of funds and lack of qualified specialists for innovative companies and venture capital funds are problematic. According to the Statistics Agency of the Republic of Kazakhstan, the level of innovation activity is still very low, estimated in 2012 at 7,6%.

In that regard, we will try to assess here the current state of venture capital in Kazakhstan and to propose recommendations for its development, taking into account the global context in venture financing.

Data and Methodology:

In the article, we refer to the available reports and studies of foreign and domestic scholars and institutions in the field of venture capital. Theoretical methods of comparisons and generalizations analysis are used for the official data processing regarding venture capital in Kazakhstan and in the world.

Theoretical Foundations of Venture Financing:

Having studied various scientific works on defining the essence of venture financing, we came to the following conclusion. Firstly, there is no single interpretation of the term. For example, according to Krajewski I.S. "venture funding is an investment in exchange for a share in the company at the stage of start-up, based on the capitalization growth of the financed companies in the future and higher profit on the sale of this stake after a certain time."

Yurzinova I.L, Vorontsov YU.O, Kalinenko EM believe that "venture financing is a long-term (5-7 years), high-risk investment of private capital into the equity capital of the newly created small high growth companies (or the already well-established ventures), focused on the development and production of high technology products, their development and expansion, in order to profit from the growth in the value of invested funds."

However, there are some similar provisions in their definition of "venture capital." Firstly, venture capital is a capital investment in the company through the share participation (equity). Secondly, it is the investment in new high-tech companies (start-up) for the purpose of obtaining high profits through the sale of shares (or gains) in the next period.

In our view, this notion should be complemented by the fact that the essence of venture funding is to support small innovative company in its infancy. Particularly, when the company does not have assets (except for terminating R&D or the prototype of its

new product), but it has already required significant financial resources for the further growth. This can be explained by the aim of venture investment at creating innovation or commercialization of the innovation at various stages:

- The applied research related to bringing the idea to the creation of pilot samples of new products and the evaluation of its commercial potential;
- The initial mass production and first sales;
- The expansion of production and access to new markets.

There are two main forms of the venture business: corporate venture structures and traditional venture capital funds.

The corporate venture capital structures allow the corporation to increase the inflow of new ideas, knowledge and technologies, which enhances its competitiveness in the market. Therefore, the corporate venture structures are usually inside large corporations. Such funds pursue the goal of the technological renovation of the corporation itself through the acquisition of start-ups. Start-up is a young company, which possesses prototypes and tries to organize the production and to enter into the market of new products.

The traditional venture capital funds focused on finding and investing of small innovative companies with high growth potential. Venture capital has made possible the emergence of such companies as «Apple», «Microsoft», «Google», «Intel» and other famous brands. Undoubtedly, Kazakhstan needs primarily the traditional venture funds, which could offer opportunities for the small but growing innovative sector.

Analysis of the Current State of Venture Capital Financing in Kazakhstan:

Prerequisites for the formation of venture financing began with the adoption of the Program of the National Innovation System within the framework of the Strategy of Industrial and Innovation Development of the Republic of Kazakhstan for 2003-2015. In 2003, under the Government Resolution of the RK, JSC "National Innovation Fund" with 100 percent state ownership was established.

As it can be seen from Table 1, from 2004 to 2009 on the initiative of the NIF there were established 11 venture capital funds, including 6 domestic and 5 foreign venture capital funds.

As it was noted above, the NIF is involved in 5 foreign venture capital funds, which aims to attract foreign capital, to create mutually beneficial cooperation with high-technology companies and to open new opportunities for science development in Kazakhstan.

The five foreign venture capital funds are the following:

1. European technology venture fund «Wellington Partners Ventures III Technology Fund

LP». Place of registration - U.S. geography of investments - Germany, the rest of Europe. Major partners of the Fund are: European Investment Fund, StichtingPensioenfondsvoor de Gezondheid, StichtingPensioenfonds ABP, TheWellcome Trust Ltd., Access Capital Technology II, etc.

Share capital equivalent: \$150 mln. Agency's share: \$7,7mln. Currently 11 companies in the field of IT and nanotechnology are being financed. Successful exit from 5 portfolio companies is completed.

2. Central Asia Small Enterprise Fund - CASEF. Place of registration - U.S. geography of investments

- Central Asia. In parallel with the NIF, the target investments into innovative CASEF shares are made by the International Finance Corporation (IFC) and the State Secretariat for Economic Affairs of Switzerland (SECO). Equity shares of emissions of the innovation will be used by the CASEF to finance small and medium-sized companies in Kazakhstan, whose main activity is the creation, use and development of innovative technologies.

Share capital equivalent: \$4,2mln. Agency's share: \$2 mln. Currently 2 companies in the field of leasing services and healthcare are being financed.(Table 1).

Table 1: Venture funds of Kazakhstan

Name of the fund	Co-investor	Authorized capital	Share of the NIF
Domestic venture capital funds			
JSC "Areket'High Technology Fund"	JSC "TuranAlemSecurities"	\$ 4,2 mln	\$ 2 mln
JSC "VC Fund "Advant"	JSC "Lancaster Invest"	\$ 20 mln	\$ 9,8 mln
JSC "Equity Venture Capital Investment Fund "Venture Fund Sentras"	JSC "Sentras Securities"	\$ 20mln	\$ 9,8 mln
JSC "Almaty venture capital"	JSC "Almaty Business Group"	\$ 20 mln	\$ 9,8 mln
JSC "Venture Fund Glotur Technology Fund"	JSC "Glotur"	\$ 20 mln	\$ 9,8 mln
Logycomperspectiveinnovations	AO «Logycom»	\$ 20 mln	\$ 9,8 mln
Foreign venture capital funds			
Wellington Partners Ventures III Technology Fund L.P.	National Innovation Fund	€150 mln	€ 7,7 mln
Central Asia Small Enterprise Fund -CASEF	National Innovation Fund	\$ 4,2mln	\$ 2,0mln
Flagship Ventures Fund 2004, L.P.»	National Innovation Fund	\$ 151,5mln	\$ 10 mln
BΦ «JAIC-Mayban ASEAN Fund	National Innovation Fund	\$ 40 mln	\$ 5 mln
Venture Fund Vertex III Fund L.P	National Innovation Fund	\$ 126,5 mln	\$ 5 mln
Sources: National Agency for Technological Development //http://www.nif.kz/our_activities/investment/venture_financing/foreign_venture_capital_funds. 20.08.2014.			

3. «Flagship Ventures Fund 2004, L.P. ». Place of registration - U.S., geography of investments - East Coast of the U.S. Major Partners of the Fund are: Treasury Michigan, California pension system, the pension system in Delaware, Cornellus Capital Partners, LLC, Mayo Foundation, Next generation partners IV, LP.

Share capital equivalent: \$151,5mln. Agency's share: \$10 mln. Currently 14 companies in the field of IT and medicine are being financed.

4. «JAIC-Mayban ASEAN Fund». Place of registration - Malaysia, geography of investments - ASEAN countries. In addition to the NIF, the founders are: Japan Asian Investment Company, Mayban Ventures, KTB Ventures.

Share capital equivalent: \$40 mln. Agency's share: \$5 mln. Currently 5 companies in industrial and high technology sectors are being financedSuccessful exit from 2 portfolio companies is completed.

5. Venture Fund Vertex III Fund L.P.is among the ten leading management companies of Israel, was founded in the early 90s with the support of the state program Yozma. According to 2006 data, under the

control of Vertex Venture Capital is more than \$ 600 mln.JSC "NATD" becomes a shareholder Vertex III Fund LP and has access to Israeli technology in the field of semiconductors, networking and software solutions, telecommunications technology and computer components.

Share capital equivalent: \$126.5 mln. Agency's share: \$5 mln. Currently 16 companies in IT, industrial and high technology sectors are being financed. Successful exit from 2 portfolio companies is completed

The strategic goal of establishing the joint venture funds is to provide access to advanced Western technology and for their subsequent transfer to Kazakhstan.

During the analyzed period, 251 projects with a promising potential for commercialization were under consideration of the created venture funds. Domestic venture capital funds approved funding for 14 investment projects, totaling \$ 25 million in areas such as new materials, information technology, semiconductors, biotechnology, consumer products, and pharmaceuticals. Examples of projects are:

- The development of silane technology, the

organization of the industrial production of high-purity silicon, the project cost - 65,1 million tenge;

- The development of centers, which are able to provide a full range of services in the field of digital technology, the project cost - 54 million tenge;

- The development and creation of pilot samples of the new vortex heat generator, the project cost - 112.2 million tenge;

- The construction of a new plant of ferroaluminium silicon, the project cost - 522 million tenge;

- The production of heat insulation materials from the basalt fiber, the project cost - 186,2 million tenge;

- The creation of the pharmaceutical complex to manufacture domestic anticancer drug "Arglabin." The total project cost is about 1 billion tenge;

- The creation of the cokeless iron production method through the innovative process of Romelt.

- The production of modern universal log recorders "Geoskan" in the set of downhole tools, the project cost - 1.9 billion.

- The production of monitors and televisions, creation of a research laboratory at JSC "Glotur DS Multimedia" and others.

However, in 2010, the NIF has successfully emerged from two domestic funds "Advant" and "Almaty Venture Capital" with a total profit of \$58.2 mln. Currently, the NIF is a partner of 4 domestic venture capital funds «Centras», «Areket», «Delta Technology Fund» and «Logycom perspective innovations». Additional capitalization of the first domestic venture capital fund "Areket", as a result of the issuance and placement of additional ordinary shares, has increased its authorized capital from 4 to 30 million U.S. dollars. Thus, "Areket" has become the largest venture capital fund in Kazakhstan.

In addition, at the initiative of the Foundation for Sustainable Development "Kazyna" and the NIF, the Kazakhstan Association of venture capital and private equity KazVenture was created in 2013. The purpose of the association is to unite the interests of participants in the financial segment of the venture capital and private equity, and to present their views to the concerned legislative and executive authorities. An additional objective is to advocate for the companies and make them known by the medias and the public in Kazakhstan.

The founders of the association were the NIF, venture fund "Advant", venture fund Centras, fund of high technology "Areket", Glotur Technology fund and Almaty Venture Capital.

Findings and Discussion:

Positive trends in venture financing, resulting from effective industrial and innovative policy in Kazakhstan, have improved the cost-effectiveness of the implemented innovative projects, increase the technological capacity of the domestic industry, improve the quality and volume of production and

services.

However, based on the results of the published data and analysis in the scientific article of A.Groh, H.Liechtenstein, K. Lieser and M.Biesinger, the following general conclusions can be drawn.

The explaining factor of the rapid development of venture capital financing in Kazakhstan is the high level of economic growth and activity (20). The negative side, which may adversely affect the venture funding, is the low level of development of capital market in Kazakhstan (89) and the limited human capacity and social development (81). Overall, Kazakhstan is on the 70th place on the development of venture capital financing among 87 countries in the world.

Overall, most large companies in Kazakhstan still do not show any interest in the formation of corporate venture structures. This situation is due to their limited innovative activity, lack of capacity and motivation, inefficient interaction between science and business and high risks, associated with the venture capital business.

In this regard, the President of Kazakhstan Nazarbayev N.A. has announced to the major investors a proposal to establish a single fund where each company could participate at a certain percentage. The objective is to stimulate innovation in the production and generate profits for their development.

According to experts, the main obstacles to the development of innovations in Kazakhstan are poor infrastructure, quasi absence of innovation culture and risk management practices, small domestic market, low financial incentives and competition, weak governance and regulation and high bureaucracy.

Prospects for the development of venture capital financing in Kazakhstan:

For the efficient use of venture capital, ideal formula could be the creation of regional/ sectorial venture funds with non-controlling block of shares of the state. Pilot regions will be the East Kazakhstan, Karaganda and the Uralsk. Regional venture capital funds "Tabys", "Ontustik", "Parassat", "Advant II" and "Advant III" are planned to be established.

For the purpose of effective cooperation between venture businesses, academic institutions and the industrial enterprises, innovative clusters are under consideration. In this regard, increased share of private sector participation is to be encouraged using the public and private partnership mechanism. Moreover, it is advisable to encourage private financing through tax incentives for venture investments.

Conclusion:

The financial infrastructure of innovative activity is now formed with the creation of the venture capital funds in Kazakhstan. The NIF's involvement in the creation of venture funds is

building favorable conditions for effective interaction between research organizations, universities, industrial enterprises and financial institutions in the interests of industrial-innovative development of the domestic economy. The first steps have been taken to establish venture institutions, which are able to provide effective assistance in the implementation of innovative projects, their extension and commercial success.

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