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A STUDY ON VENTURE CAPITAL: PERFORMANCE ANALYSIS OF VENTURE CAPITAL INVESTMENT TRUST INCORPORATIONS IN TURKEY

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RİSK SERMAYESİ VE TÜRKİYE EKONOMİSİ ÜZERİNE İNCELEME: GİRİŞİM SERMAYESİ YATIRIM ORTAKLIĞI FİRMALARININ PERFORMANS ANALİZİ

Öz

Gelişmekte olan ülkelerin gelişmiş ülkeler ile arasındaki farkı kapatabilmeleri özellikle riskli teknolojik yatırımların gerçekleştirilebilmesine bağlıdır. Bu teknolojik yatırımlar, sağlık sektöründen eğitim alanına enerji sektöründen savunma sanayine kadar çok geniş bir alanı kapsamaktadır. Dolayısıyla söz konusu yatırımların gerçekleştirilebilmesi için yoğun sermaye gerekmektedir. Sermaye yetersizliğinin söz konusu olduğu özellikle gelişmekte olan ülkelerde alternatif finansman yöntemi olarak risk sermayesinin uygulanabilirliği çalışmanın ana eksenini oluşturmaktadır. Türkiye'de bu sermayeyi sağlayan unsurlardan biri de Girişim Sermayesi Yatırım Ortaklığı firmalarıdır. Girişim sermayesi firmaları rekabet ve yüksek büyüme potansiyeline sahip şirketlere yatırım yaparak gerek şirketlere değer kazandırmayı gerekse yatırımcılarına kazanç sağlamayı hedeflemektedir. Dolayısı ile yatırım yapılan şirketlerin başarısı girişim sermayesi firmalarının performans göstergelerine yansıyacaktır. Bu bağlamda örneklem olarak seçilen girişim sermayesi firmalarının likidite, finansal yapı ve kârlılık oranları analiz edilmiş ve performansları karşılaştırılmıştır. Yapılan ampirik analizler sonucunda firmaların likidite, finansal yapı ve kârlılık oranları açısından ortalama olarak birbirinden farklı performans sergiledikleri görülmektedir.

Anahtar Kelimeler: Risk Sermayesi, Alternatif Finansman, Performans Göstergeleri.

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Abstract

Closing the economic development gap between developing countries and developed countries in particular depends upon the realization of risky technological investments. These technological investments cover large areas from health sector to education and from defense sector to energy. Implementing these extensive investments requires very much capital-intensive affairs. Practices of venture capital, as an alternative financing method constitutes the main axis of this study especially for the developing countries where the capital insufficiency is widespread. Venture capital investment trust incorporations are the one of the components providing capital for these investments in Turkey. Venture capital firms aim to add value to the companies and to supply earnings to the entrepreneurships through investing in the companies with high growth and competitive power. Therefore, the success of the companies that are funded by the venture capital investment trusts will be reflected in the performances of these venture capital firms. In this context, liquidity, financial structure and profitability ratios are analyzed and compared for the selected sample venture capital investment trust companies operating in Turkey. As a conclusion of empirical analysis, it is seen that on the average, these companies exhibit different performances from each other in terms of liquidity, financial structure and profitability ratios.

Keywords: Venture Capital, Alternative Financing, Performance Indicators.

1. Introduction

There are not certain practices or policies that could be applied to every economy for the economic growth and development. At the beginning of industrialization period, some economies carried out inward-oriented (import substitution) protective foreign trade and industrialization policies (Yiğit and Güner, 2008: 257). Since 1980, the world economy and finance become increasingly globalized with the development of communication and transportation technologies. Thus, the terms such as “information society”, “post-capitalist society”, “new economy” and “information age” describing characteristics of this age constitute intensive competition among companies. The fierce competition in the market forces the companies to provide better quality of service, to make production with lower costs and make innovation continuously (Sakaryalı, 2014: 184).

Schumpeter defines the entrepreneurs as the actors who have several different personal characteristics from other people and able to motivate the static and inactive people by making innovations in production factors (Schumpeter, 2003: 23-24). In other respects, the concept of venture

capital, which is known as "mudaraba" in Islamic finance and used as "commandita" by Venetian and Netherlander merchants, was started to be implemented with the modern meaning in the year 1946 by the United States. The system can be described as long-term investments made by the investors who have excess funds for the growth potential companies or small medium sized firms in order to be able to start their operations or to expand their businesses to wider markets. Venture capitalist consist of such parities like banks, insurance companies, and individual or institutional pension and social security funds and they also contain the elements of technological innovation, capital participation, rapid growth, long term investment and management participation (Çoban and Saban, 2006: 131-132).

2. Venture Capital and Literature Review

The basis of the venture capital model aims to produce salable goods in the light of technological improvements. In this context, the model analysis the entrepreneurs and their ideas of closely follow scientific developments. Then the venture capitalists provide necessary funds for the projects that could be successful investments. Thus, venture capital model confront us as an alternative financing model (Akkaya and İçerli, 2001: 64).

On the other hand, the factors such as developments in the capital markets for venture capitalist, the ease of some taxation applications in favor of venture capitalists, high profits obtained by facilitating investment financing and reductions in the manufacturing costs along with the technological developments have increased the interest in the venture capital investments (Tuna and İsabetli, 2014: 33).

Uludağ (1996), in his study, stated that venture capital model played a key function for maintaining the growth and development of small and medium sized enterprises(SMEs) which have important effects on economic development and productivity. In their research Damanpour et al. (2009), focused on the essentiality of the innovation in the service sector and recommended that an effective organizational structure could be improved by creating technological administrative innovation portfolio. According to the study of Freear et al. (2002) angel investors provide significant contributions to the entrepreneurs about know-how as well as financial support. Wright and Lockett (2003) emphasized that the investments of the owners of venture capital firms should be the

investments, which improve the management and coordination facilities of the companies. In another study, Gompers and Lerner (1998) examined the legality of the distribution of venture capitalists' funds and the need of public information about transfer of resources. Bender and Lutz (2010) in their investigation for the periods of January 2002 and March 2007 in Germany made a research with 1276 entrepreneurs and as a conclusion of their study; they found out that young entrepreneurs should be promoted in accordance with their focus of innovation. Del Colle et al. (2006) in their study; underlined that the venture capital firms should correctly and effectively use their equity and debts, which shows the financial structure of the companies, and also together with this they should focus on and appeal to the consultancy services. Engel and Keilbach (2006) in their research in Germany including 21.541 firms which want to receive venture capital funds classified according to their area of industry, their ages and number of patents they have, determined that the best growth performance of the firms were the ones which displayed innovative behaviors among others. Dushnitsky and Lenox (2006) ascertained when venture capitalist supported the companies intensively using information technology, these companies became more successful in the future.

The main features of the venture capital model can be expressed as follows (Chemmanur and Loutskina, 2006: 27):

- In the model, venture capitalists have the rights not to support the investment financially.
- In the venture capital model, stocks or similar financial instruments could be used in order to realize the investment financing.
- Financial support is especially long term and more cost effective in comparison of other financing tools such as debts.
- Venture capitalist significantly undertakes the business risk.
- The parties, both the venture capitalists and the supported companies, have an active partnership and participate in management decisions.
- The profit of the venture capitalist is the positive difference between the funds invested in the business and the market value of the shares.
- Investment projects should especially include the small and medium sized companies, which have growth potential of manufacturing new technological products.

The venture capital process operates in the following way (Fischer and Jordan, 1995: 565);

- First, a professional feasibility report with extensive financial and technical research for the product or design is prepared.
- In the consequence of feasibility report, the costs of projects have been determined.
- A business plan based on the feasibility study is prepared and sent to the venture capitalist firm.
- Then the venture capital experts make an overall examination of the business plan and if the nature of the project is hopefully profitable, they start a detailed investigation on the plan.
- After detailed examination if the project is still convincing, the venture capital company make its own experts prepare the feasibility research again. On the other hand, at this stage if the project is not sufficient it will be rejected.
- If the project has been found feasible with the expected level of profitability, the negotiations to establish a partnership joint with the venture capitalist start.
- After the negotiations if the agreement is reached the venture capital company initiates the establishment processes for the realization of the project.

Angel investors not only provide financial support to innovative companies but also management support as well as providing training services. In addition, they play an active role in decision making on important issues. In other respects, the number of investments made by the angel investors is not so much and they have little experience in making investment. They make investments with a spirit of adventurous and amateurish. On the other hand, institutional investors do not take part in the management of innovative companies they support but carry out strategic controls in the companies. The institutional investors make professional investments with the purpose of obtaining high returns. They have a lot of number of investments and experience (Sakaryalı, 2014: 200).

Venture capital firms should undertake such risks mentioned below (Sarıkamış, 1995: 157):

- *Technological Risk:* The venture capital firm does not have sufficient experience in technological research and development or the funds are not sufficient to cover these types of technological risks arising from the project.
- *Management Risk:* It is the risk that the management of supported company may lack the ability to fulfill its management functions.
- *Financing Risk:* It is the risk of not providing additional funds required to bring the products to the market during production stage.
- *Production Risk:* The technology used may not be suitable for large scale of production. The same risk arises in failure of the transmission of the prototype product to a marketable product.
- *Marketing Risk:* Are the risks that may arise in the stage of marketing the product.
- *Risk of Becoming Outdated:* It is the risk of market conditions becoming outdated before the product sales reach a sufficient level in especially for the products including advances technology with a short life cycle.

Venture capital companies are aware they are exposed to high risks of investments. To reduce the risks the companies carefully examine the development of entrepreneurs and sectors in which they operate. In addition, if it is necessary they take investment advisory services in order to minimize the overall risk in their investment. Another most important risk for the venture capitalists arises when the capitalist wishes to make profits in short term because the value of the shares of the company that is financially supported by the venture capitalist reaching a desired level takes generally longer period of time (Çoban and Saban, 2006: 133-134, 136).

3. Development and Economic Evaluation of Venture Capital in Turkey

From a technological perspective, Turkey is in a position of largely foreign-dependent in many industrial areas (Yiğit and Güner, 2008: 265). After 1980, outward-oriented industrialization and economic policies based on liberalization and efforts to integrate into the global economy have been frequently interrupted by the ongoing economic and financial crisis. The failure to achieve economic stability and therefore acquiring

capital is too expensive have become the biggest obstacles for entrepreneurs to provide necessary funds in order to make investments. The economic stability was ensured along with the International Monetary Fund (IMF) supported program implemented after the 2001 financial crisis and the cost of financing decreased thus the number of entrepreneurs increased in the country. Entrepreneurship in Turkey is rapidly developing with many new initiatives and activities such as techno-parks, business development centers and entrepreneurship programs (Bayar, 2012: 139-140).

Because of high lending interest rates of traditional financial institutions and banks in Turkey and other developing countries, the venture capital model has improved. It is not possible to access the long-term investment using the traditional high-cost funds. In addition to this, the number of entrepreneurs in developing countries is less and so the investment amount of private investors is in the low level. Therefore, the financing way of venture capital model that does not require principal or interest payments is a very important alternative structure for entrepreneurs (Akkaya and İçerli, 2001: 62-63).

Under normal conditions when entrepreneurial companies start to increase their market values after a certain period of maturity, the venture capitalists liquidate their investments in the company and withdraw from the partnership on average of 3-10 years. Withdrawal from the partnership is generally conducted by the way of initial public offering, wholesales of shares or redemption of the company's shares by itself. In an economy that financial system and stock market functions effectively, the implementation of innovative projects compared to other projects is relatively easier. The advanced financial systems can ease the problem of asymmetric information thus an important step taken in order to minimize the undertaken risk and promotion opportunities increased for both entrepreneurs and venture capitalists (Tuna and İsabetli, 2014: 31, 36-37).

Venture capitalists directly and indirectly affect the economic growth positively since they accelerate the innovative activities of enterprises in which they invest, as well as supporting research and development activities. With venture capital investments new business opportunities emerge, production increases, wage level rises, competition accelerates, and together with these growth in investments and exports is experienced and so it has been contributed to the both national and regional development (Bender and Lutz, 2009: 3).

The structural formation of institutional players, which is required for establishment of venture capital market functioning effectively based on sound principals, may be in various forms in Turkey. Access to the venture capital system should be facilitated especially for the small-media sized businesses, those are the essential elements of the venture capital system which have original and creative ideas with a growth of desire, in order to achieve such a structure of venture capital markets like in developed countries while providing opportunities for the investments made by venture capitalist. By "Notification Regarding the Amendments in Venture Capital Investment Trust Incorporation Principles" published in the Official Gazette on 21 January 2009, the venture capital funds established in Turkey will be able to participate in the abroad funds in order to make investment in SMEs in Turkey. Thus, it is aimed to attract a significant amount of foreign resources providing input for the investments in Turkey. Venture capital companies operating in Turkey as of January 2016 are Young Turk Ventures, 212 Venture Capital, Aksoy Internet Ventures, iLab Venture, Technology Investment Company, İş Private Equity, İstanbul Venture Capital, Kobi Venture Capital Investment Trust Incorporation, Esas Holding Company, Rhea Venture Capital Investment Trust Incorporation, Gedik Venture Capital Investment Trust Incorporation, Egeli & Co Agriculture Investment Trust Incorporation, Egeli & Co Venture Capital Investment Trust Incorporation and Gözde Venture Capital Investment Trust Incorporation. Additionally foreign venture capital companies operating in Turkey are Hummingbird Ventures, Intel Capital, Tiger Global, Accel Partners, Pond Ventures, 3TS Capital Ventures, ePlanet Capital, General Atlantic, Fidelity Growth Partner, Earlybird, Lumia Capital, Corporate Finance Partners, Ru-net and Quants Financial Services.

The scope of this study is venture capital investment trust incorporations operating in Turkey that provide financial and managerial support to the companies having competitive advantages with growth potentials in their sectors. Venture capitalists provide the entrepreneurs to benefit the most appropriate way from their knowledge, expertise and experiences by activating collective resources they have. Moreover, these incorporations aim to offer the shareholders a higher profit than other alternative investments through efficient portfolio management and exemplary institutional structure. The success of the companies supported by the venture capitalists will be reflected in the performance indicators of the venture capital investment trust incorporations. That is why, in this context, evaluation of liquidity, financial structure and profitability ratios

of the venture capital investment trust incorporations will be useful for the participants in venture capital system, policy and decision makers and all other related parties from academicians to business actors.

4. Empirical Analysis and Findings

Quarterly balance sheet and income statement values of the venture capital investment trust incorporations for the periods between 2006 and 2015 are used in the scope of this study. Among these companies, the six ones, which of these shares traded at Borsa Istanbul, are selected as sample. The liquidity positions, financial situations and profitability ratios of the selected companies given the ticker and share names following below are analyzed.

The data used in the study is obtained from the Public Disclosure Platform electronically.

Ticker symbol and names of the venture capital investment trust incorporations evaluated in the context of the analysis are as follows:

- EGCYO : Egeli & Co Agriculture Investment Trust Incorporation
- EGLYO : Egeli & Co Venture Capital Investment Trust Incorporation
- GDKGS : Gedik Venture Capital Investment Trust Incorporation
- GOZDE : Gözde Venture Capital Investment Trust Incorporation
- ISGSY : İş Private Equity
- RHEAG : Rhea Venture Capital Investment Trust Incorporation

Liquidity, financial structure and profitability ratios that are analyzed in the study and their calculation formulas are as follows:

- Current Ratio = Current Assets / Current Liabilities
- Liquidity Ratio= [Current Assets – Inventories] / Current Liabilities
- Short-term Liabilities / Short-term Receivables Ratio = Current Liabilities / [Receivables under Current Assets : Factoring Receivables + Short-term Trade Receivables + Financial Leasing Receivables + Receivables from Financial Sector Operations + Receivables from Related Parties+ Other Short-term Receivables]
- Owner's Equity / Total Assets Ratio = Owner's Equity / Total Assets
- Financial Leverage Ratio = [Current Liabilities + Long-term Liabilities] / Total Assets

- Short-term Liabilities / Assets Ratio = Current Liabilities / Total Assets
- Financial Liabilities / Assets Ratio = [Short-term Financial Liabilities + Long-term Financial Liabilities] / Total Assets
- Short-term Trade Payables / Assets Ratio = Short-term Trade Payables / Total Assets
- Financial Liabilities / Total Liabilities Ratio = [Short-term Financial Liabilities + Long-term Financial Liabilities] / [Current Liabilities + Long-term Liabilities]
- Gross Profit Margin = Gross Operating Profit (Loss)/ Sales
- Operating Profitability = Net Operating Profit (Loss) / Sales
- Net Profit Margin = Net Profit (Loss) / Sales
- Return on Assets = Net Operating Profit (Loss) / Total Assets
- Return on Equity = Net Profit (Loss) / Owner's Equity

Information of descriptive statistics calculated for each company is presented at the appendix of the study (Also see Appendix 1, Appendix 2 and Appendix 3).

In terms of liquidity perspective, Gedik Venture Capital Investment Trust Incorporation is the first and Rhea Venture Capital Investment Trust Incorporation is the second liquid company on average. Gedik Venture Capital Investment Trust Incorporation is again the first company in terms of financial structure and Egeli & Co Venture Capital Investment Trust Incorporation is the second one. On the other hand, when we look at the average profitability ratios especially for the shareholders, İş Private Equity takes place on the top and Gedik Venture Capital Investment Trust Incorporation is the second company.

Within the scope of the study, the performances of the selected venture capital incorporations are compared with each other in terms of liquidity, financial structure and profitability ratios in order to analyze their activities. As mentioned before venture capital companies aim to add value to the firms that have growth and competitive potentials through making investments in these firms as well as make investors to earn profit. The success of these firms supported by the venture capitalists will be reflected in the performance indicators of the venture capital investment trust incorporations. Therefore, in this context, it will be beneficial to analyze the basic indicators like liquidity, financial structure and profitability ratios of these incorporations.

In order to compare and analyze the ratios Kruskal Wallis and Jonckheere-Terpstra tests are applied. For the analysis, SPPS Statistics software 22. Version is used. Kruskal Wallis test is an alternative test for non-parametric one way of variance analysis between groups. The test analysis provides a comparison for three or more independent groups. This intra-group analysis method compares the ranks of samples, in other words, the test is applied for the multiple comparison on ranks of several independent groups. Kruskal Wallis test is applied in order to measure whether there is a difference between the venture capital investment trust incorporations or not in terms of liquidity, financial structure and profitability. In addition, Jonckheere-Terpstra trend test is performed to analyze the trends in the discrepancies between the firms' indicators, if there are.

Following the analysis, the outputs obtained are presented as a summary at Table 1 for each company and ratio. According to the results of Kruskall Wallis asymptotic significance values, it can be said that the variables (the venture capital investment trust incorporations) as a whole are statistically and significantly different from each other for the values under a 5% significance level. In other words, the venture capital investment trust incorporations have, on average, different weights from each other in terms of liquidity, financial structure and profitability ratios.

On the other hand, it will be seen that the values will not be statistically and significantly different from each other at comparison in pairs for the incorporations whose values of mean ranks are very close to each other. For example, mean ranks values of Egeli & Co Agriculture Investment Trust Incorporation and Egeli & Co Venture Capital Investment Trust Incorporation are very close to each other for the following ratios: Current Ratio, Liquidity Ratio, Owners' Equity / Total Assets Ratio, Return on Assets and Return on Equity. It can be said that these two statistically look so much alike for the mentioned ratios. Similarly, some mean ranks values of İş Private Equity and Rhea Venture Capital Investment Trust Incorporation are partially close to each other. In addition, it is observed that Gedik Venture Capital Investment Trust Incorporation and Gözde Venture Capital Investment Trust Incorporation are different from both each other and the other incorporations in terms of several ratios.

Furthermore, Jonckheere-Terpstra trend analysis test is applied in order to determine whether those statistically significant differences are at a level of showing a trend or not. When we look at the Table 1 that summarizes

all test results for each company and ratio, at the level of 5-percentage significance, it can be said that the significant differences among the firms for the ratios of "Short-term Liabilities / Short-term Receivables", "Operating Profitability" and "Net Profit Margin" cannot cause a trend as it is understood from the asymptotic significance values.

Table 1. Comparison of the Liquidity, Financial Structure and Profitability Ratios

		Current Ratio	Liquidity Ratio	Short-term Liabilities / Short-term Receivables	Owner's Equity / Total Assets	Financial Leverage	Short-term Liabilities / Assets	Financial Liabilities / Assets	Short-term Trade Payables / Assets	Financial Liabilities / Total Liabilities	Gross Profit Margin	Operating Profitability	Net Profit Margin	Return on Assets	Return on Equity
EGCYO		111,90	112,10	75,61	119,56	97,41	101,74	86,73	110,77	88,92	60,29	85,19	90,93	101,01	106,73
EGLYO		112,82	112,87	70,39	120,85	99,09	106,90	69,12	97,77	70,31	68,07	96,68	85,03	114,86	110,40
GDKGS	Mean Ranks	190,19	190,19	104,67	189,85	28,57	29,35	66,50	68,54	66,50	73,73	112,88	101,19	159,97	142,34
GOZDE		20,70	20,65	94,75	25,04	192,59	175,72	188,39	119,13	183,35	101,92	79,36	69,67	107,20	75,41
ISGSY		96,00	95,46	73,21	88,35	126,35	128,23	139,09	129,00	146,14	140,12	118,69	140,74	132,40	147,13
RHEAG		87,56	87,87	96,95	77,28	137,40	132,58	131,79	128,10	124,33	105,52	20,35	20,35	37,67	57,15
Kruskal Wallis Test	Chi-Square	114,85	114,92	11,48	120,41	116,00	96,38	115,67	25,07	109,80	57,10	60,17	80,93	81,88	58,59
	Asymp. Sig.	0,00	0,00	0,04	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Jonckheere-Terpstra Test	Asymp. Sig.	0,01	0,01	0,15	0,00	0,00	0,00	0,00	0,01	0,00	0,00	0,07	0,64	0,00	0,02

5. Conclusion

Venture capital as a new alternative financing and investment method especially in developing countries in where there is inadequacy of capital adds dynamism to the economy. In this respects, Venture Capital Investment Trust Incorporations among the institutions that provide capital to the entrepreneurs play a crucial role in Turkey. Venture capital corporations make valuable contributions to the economy by making investments in the companies that have potentials of growth and competition. The achievement of the companies reinforced by the venture capitalists will be reflected in the performance indexes of the venture capital investment trust incorporations. In other words, whether business activities of the entrepreneur firms, that need support for their investments, resulted in the conclusion of success or not could be understood from the performance indicators of the venture capitalist corporations that support those entrepreneur firms. In this regard, liquidity, financial structure and profitability ratios of the selected sample of venture capital investment trust companies operating in Turkey are analyzed and their performances are compared.

Kruskal Wallis and Jonckheere-Terpstra tests are used in the empirical analysis. Kruskal Wallis test is applied in order to measure whether there is a difference between the venture capital investment trust incorporations or not in terms of liquidity, financial structure and profitability. Moreover, Jonckheere-Terpstra trend test is performed to analyze the trends in the discrepancies between the indicators. As a consequence of empirical tests, it has been found out that the venture capital investment trust companies are not statistically and significantly different from each other at comparison in pairs for the incorporations whose values of mean ranks are very close to each other. However, it can be said that the companies as a whole are statistically and significantly different from each other. This means that their performances are different from each other. The venture capital investment trust incorporations have, on average, different values of liquidity, financial structure and profitability ratios.

References

Akkaya, Göktuğ Cenk ve içerli, M. Yılmaz (2001), "Kobi'lerin Finansal Problemlerinin Çözümünde Risk Sermayesi Finansman Modeli",

Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, C: 3, S: 3, s. 61-70.

Bayar, Yılmaz (2012), "Girişimcilik Finansmanında Risk Sermayesi ve Melek Finansmanı", *Girişimcilik ve Kalkınma Dergisi*, C: 7, S: 2, s. 133-144.

Bender, Marko and Lutz, Eva (2010), ''Patterns in Spatial Proximity Between Venture Capital Investors And Investees in Germany',' *Center for Entrepreneurial and Financial Studies*, Working Paper Series, No. 2009-06.

Chemmanur, Thomas J. and Loutskina, Elena (2006), "The Role of Venture Capital Backing in Initial Public Offerings: Certification, Screening, or Market Power?", *EFA 2005 Moscow Meeting Paper*. Available at SSRN: http://ssrn.com/abstract=604882 or http://dx.doi.org/10.2139/ssrn.604882

Colle Del, D. M., Russo, P. Finaldi and Generale, A. (2006), ''The Causes and Consequences of Venture Capital Financing: An Analysis Based On A Sample of Italian Firms'', *Bank of Italy Working Paper*, No. 584.

Çoban, Metin ve Saban, Metin (2006), "Türkiye'de Risk Sermayesi Uygulaması ve Sorunları", *Muhasebe ve Finansman Dergisi*, S: 31, s. 131-140.

Damanpour, Fariborz, Walker, Richard M. and Avellaneda, Claudia N. (2009), "Combinative Effects of Innovation Types and Organizational Performance: A Longitudinal Study of Service Organizations", *Journal of Management Studies*, Vol. 46: 4, pp. 650-675.

Davila, Antonio, Foster, George and Gupta, Mahendra (2003), ''Venture Capital Financing and The Growth of Startup Firms'', *Journal of Business Venturing*, Vol. 18, pp. 689-708.

Dushnitsky, Gary and Lenox, Michael J. (2006), ''When Does Corporate Venture Capital Investment Create Firm Value?'', *Journal of Business Venturing*, Vol. 21, pp. 753-772.

Engel, Dirk and Keilbach, Max (2007), ''Firm-Level Implications of Early Stage Venture Capital Investment - An Empirical Investigation'', *Journal of Empirical Finance*, Vol. 14, pp. 150-167.

Freear, John, Sohl, Jeffrey E. and Wetzel, William (2002), "Angles on Angels: Financing Technology-Based Ventures – A Historical Perspective", *Venture Capital*, Vol. 4, No. 4, pp. 275-287.

Gompers, Paul and Lerner, Josh (1998), ''Venture Capital Distributions: Short-Run and Long-Run Reactions'', *The Journal of Finance*, Vol. 53, No. 6, pp. 2161-2183.

Sakaryali, Arzu Meltem Dinler (2014), "İnovasyon ve Risk Sermayesi", *Girişimcilik ve Kalkınma Dergisi*, C: 9, S: 1, s. 183-210.

Sarikamiş, Cevat (1995), *Sermaye Pazarları*, Melissa Matbaacılık, İstanbul.

Schumpeter, Joseph A. (2003), *Capitalism, Socialism and Democracy*, English ed. by Richard Swedberg, New York, USA, George Allen&Unwin Ltd., 6. Ed.

Tuna, A. Kadir ve İsabetli, İlayda (2014), "İnovasyonun Finansmanı ve Risk Sermayesi", *İktisat Fakültesi Mecmuası*, C: 64, s. 27-47.

Uludağ, İlhan (1996), *Gümrük Birliği Sürecinde Kobi'ler ve Risk Sermayesi Şirketleri Modeli*, İstanbul Ticaret Odası Yayınları, İstanbul, Yayın No: 1996-42.

Wright, Mike and Lockett, Andy (2003), ''The Structure and Management of Alliances: Syndication in the Venture Capital Industry'', *Journal of Management Studies*, Vol. 40: 8, pp. 2073-2102.

Yiğit, Mehmet ve Güner, Ümit (2008), "Dış Ticaret ve Girişimcilik Perspektifinden Türkiye'de Risk Sermayesi", *Dumlupınar Üniversitesi Sosyal Bilimler Dergisi*, S: 20, s. 257-276.

OECD (Organisation for Economic Co-operation and Development) Science, Technology and Industry Scoreboard, (2011), http://www.oecd-ilibrary.org/docserver/download/9211041ec007.pdf?expires=1452006339&id=id&accname=guest&checksum=04575B3C36FC51C9035C153ACB67AD0B.

Appendices

Appendix 1: Average Values of Liquidity Items

Ticker Symbol	Current Ratio	Liquidity Ratio	Short-term Liabilities / Short-term Receivables
EGCYO	146,3	146,1	4,1
EGLYO	86,5	86,5	9,0
GDKGS	616,2	616,2	40,6
GOZDE	1,3	1,2	2,8
ISGSY	44,5	44,4	294,3
RHEAG	132,4	132,3	2,8
Number of Observasiton	216	216	165
Mean	179,6	179,6	76,5
Std. Deviation	273,6	273,6	402,7
Minimum	0,0	0,0	0,0
Maximum	1569,5	1569,5	3020,9

Appendix 2: Average Values of Financial Structure Items

Ticker Symbol	Owner's Equity / Total Assets	Financial Leverage	Short-term Liabilities /Assets	Financial Liabilities / Assets	Short-term Trade Payables / Assets	Financial Liabilities / Total Liabilities
EGCYO	0,94	0,06	0,03	0,02	0,01	0,12
EGLYO	0,97	0,03	0,02	0,00	0,01	0,03
GDKGS	1,00	0,00	0,00	0,00	0,00	0,00
GOZDE	0,52	0,49	0,21	0,39	0,02	0,69
ISGSY	0,91	0,08	0,05	0,04	0,02	0,37
RHEAG	0,82	0,19	0,16	0,08	0,03	0,27
Number of Observation	216	216	216	216	216	216
Mean	0,88	0,12	0,07	0,07	0,01	0,22
Std. Deviation	0,19	0,19	0,12	0,14	0,03	0,31
Minimum	0,23	0,00	0,00	0,00	0,00	0,00
Maximum	1,00	0,78	0,66	0,61	0,15	0,99

Appendix 3: Average Values of Profitability Ratio Items

Ticker Symbol	Gross Profit Margin	Operating Profitability	Net Profit Margin	Return on Asset	Return on Equity
EGCYO	0,079	-0,122	0,472	-0,048	-0,033
EGLYO	0,036	-0,126	-0,366	0,015	0,011
GDKGS	0,120	0,059	0,054	0,047	0,049
GOZDE	0,272	-32,079	19,276	-0,001	-0,032
ISGSY	0,584	-0,102	0,337	0,037	0,075
RHEAG	0,343	-14,890	-15,200	-0,078	-0,133
Number of Observation	182	182	182	216	216
Mean	0,240	-5,108	0,072	-0,005	-0,010
Std. Deviation	0,349	28,249	104,201	0,119	0,168
Minimum	-0,404	-258,518	-747,142	-1,058	-1,266
Maximum	1	0,728	1172,595	0,276	0,277