Venture Capital in Central and Eastern Europe: A Comparative Analysis and Implications for Bulgaria

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The paper focuses on the development of venture capital markets in selected countries of Central and Eastern Europe (CEE). Financing through venture capital is part of the common framework at EU (European Union) level in the process of further integration of the EU capital markets. Irrespective of the heightened process of integration, there still exist various barriers in front of the expansion of venture capital funds (VCF). Within CEE states, most attractive for VCF remain Hungary and Poland, while Bulgaria still lags behind. Most of the CEE countries remain far behind EU-15 in areas such as economic activity, entrepreneurial opportunities, and depth of capital markets. Most investment activities of VCFs in CEE remain deals in the later stage of small and medium-sized enterprises’ (SMEs’) development due to the relatively low returns from these investments in seed and start-up stage. This lack of start-up financing is partly compensated by public sector financial instruments at EU level (e.g., JEREMIE, etc.) or by encouraging private-public partnership initiatives. In the course of the comparative analysis, the paper reaches some conclusions about overcoming of existing market and institutional obstacles in front of Bulgarian SMEs for seeking more active financing through the forms of venture capital.

Keywords: venture capital funds (VCF), financial integration, capital markets

Venture capital financing is part of the common framework at EU (European Union) level in the process of further integration of EU capital markets. From the point of view of the public interest, the venture capital sector contributes for the competitiveness of EU and is a source of alternative external financing. The consequences of the global financial and economic crisis lead to proposals for initiation of reforms in the institutional mechanisms for encouragement and harmonized regulation of venture capital funds (VCF) in EU. Those funds operating in cross-border context achieve economies of scale via diversification of their portfolios and improvement in their returns. This on its part influences upon the economic development, employment, and competitiveness of EU.

The main problems in front of the development of venture capital in Bulgaria relate to the macroeconomic environment, deficiencies in the legal framework, and the application of the legal requirements as well as the lack of transparency in the administrative procedures, which create conditions for corruption. The inadequate level of entrepreneurial culture, the excessive degree in labor market regulation, lack of close links among universities, the state and the business sector are significant barriers for the development of the venture capital...
industry in Bulgaria. Difficulties exist in exiting venture capital investments as well, due to the low degree of development of the Bulgarian capital market, and for that reason, the most common strategy pursued by VCF is trade sales.

Central and Eastern Europe (CEE) countries are still in process of wide-scale transition and the most important factor for attraction of venture capital in the region is the low level of taxation. They lag behind EU-15 in areas such as economic activity, entrepreneurial opportunities, and depth of their capital markets. The weak aspects of these countries relate to the high levels of corruption and the considerable administrative burdens over business. The innovation activity also falls behind in view of the insignificant public and business R&D (Research and Development) expenditures and the limited number of registered patents.

**Description of the Problem**

Innovative small and medium-sized enterprises (SMEs) may develop in case of access to suitable forms of financing—most often private shareholding capital and venture capital financing. Among the main barriers in front of the international expansion of VCF in EU are legal restrictions and the limited size of the funds. The venture capital market in EU is insufficiently developed and represents only 1/4 of that of the US. In EU, SMEs rely mainly on bank crediting which accounts for over 80% of attracted funds, whereas only 2% are funds attracted by venture funds, while in the US, this value stands at about 15%. The weaknesses in the industry relate to difficulties in capital accumulation by institutional investors, the quality of investment opportunities, fragmentation of the EU venture capital market, and the dominance of bank financing over all other forms of SME financing.

In 2011, according to a research of the European Venture Capital and Private Equity Association (EVCA) (2011), only 7% of SMEs finance themselves by private equity (PE), while the share of public financing in VCF reached 30%. Besides, the publicly-quoted SMEs are not considered to be attractive enough due to the low liquidity of their shares. The activities of the VCF are concentrated on several EU member-states, namely on Great Britain [venture investments reach about 2% of GDP (Gross Domestic Product)], Germany, Sweden, Denmark, the Netherlands, France, and Spain. A correlation exists between the level of competitiveness and the venture capital investments of countries (as per the Global Competitiveness Index of the World Economic Forum).

The lack of sufficient investments in start-up phase of SMEs in EU is due to the comparatively low returns of these investments in EU (the rate of return on 10-year investments from all forms of venture capital in EU amounts to about 6.3%, while in the US, it is 26%, respectively). This lack is partly compensated by various public financial instruments under EU programmes (such as JEREMIE, Competitiveness and Innovation Programme, Horizon 2020, etc.) or through encouraging the creation of public-private partnerships. Financing of buyout deals with PE and venture capital represents about 70% of total investments in the sector. Within EU-28 exists differences not only regarding the level of development of the venture capital markets, but also in the regimes regulating these markets.

The main factors stimulating venture capital investments in the startup stages of the existence of innovative companies are:

1. Size of deals financed by venture capital—for EU, these deals are small in volumes and insufficient for innovative SMEs;
2. Capitalization of VCF—the majority of existing funds in EU are with relatively low level of
capitalization. The expenses and difficulties in functioning outside the domestic legal system are barriers for growth and for the potential for specialization of VCF. Capitalization is of importance regarding the possibility for establishing international presence and undertaking greater risks within given portfolios;

(3) Scale of the venture capital markets—the limited size of venture capital markets in the EU member-states (especially the new member-states) requires the VCF to operate in cross-border context to achieve critical mass.

**Methodology and Data Sources**

The main factors of demand and supply of venture capital may be cyclical and structural in their nature and reflect the degree of entrepreneurial activity, R&D intensity, degree of capital market development, the institutional environment, and corporate taxation in a given country.

The analysis encompasses supply and demand factors for venture capital in view of evaluating the motivating push-pull forces in front of the development of the venture capital industry in the course of the last decade. The analysis is expanded by comparative research into the venture capital markets of selected CEE countries regarding the adjustment mechanism of SMEs to alternative sources of financing in view of overcoming the consequences of limited bank financing.

The evolution in the GDP growth according to a research (European Commission—Directorate-General Enterprise and Industry, 2009b) has a strongly cyclical effect on venture capital investments and 1% rise in GDP boosts the level of venture capital by about 13%, which immediately affects supply and demand without any time lags.

Capital markets liquidity positively influences the demand and supply of venture investments and the activities of VCF are thriving in countries with well-developed capital markets. It is measured most often by the capital market capitalization as an indicator of size and liquidity of capital markets.

R&D expenditures also positively influence the supply and demand of venture capitals. The intensity indicator of R&D allows establishing the activity of hi-tech enterprises.

The comparative analysis of the venture capital industry in CEE includes research into database of attracted and invested venture capital in Bulgaria, Czech Republic, Hungary, Poland, Romania, and Slovenia, maintained by the EVCA and Eurostat for the period of 2003-2011. On the basis of this analysis, some conformities are outlined in venture capital financing by countries, sectors, investment phase (seed, start-up, and expansion), and investment exit (initial public offering, trade sale, etc.). Besides, the comparative analysis is expanded by evaluating the national programs of the selected CEE EU member-states for encouraging venture investments, situational analysis of the venture capital sector of these countries, the legal regulations pertaining to venture capital, and their capital markets with the potential for initiating niche markets for trade in securities of startup innovative SMEs.

On the basis of the comparative analysis, some conclusions with practical application for Bulgaria are drawn up in view of the further development of the Bulgarian venture capital sector and the potential for deepening its integration into the capital markets of CEE countries.

**Results Obtained**

The comparative analysis of the venture capital industry in the selected CEE countries shows that in 2011, the attraction of venture capital investments in CEE continues to restore. The total amount of attracted venture
capital for the region stood at EUR 941 million (mln) (or 2.4% of totally attracted venture capital in EU), which represents a growth by over 40% as compared with 2010. Around 14% (EUR 133 mln) are the VCF attracted from state agencies, the funds of funds (FoF) being the leading source of venture capital resources for the region (25.5% from the total), followed by pension funds (12.7%) and banks (12.2%). Most active in attracting capital investments in CEE is Poland and Czech Republic, and in the last few years, Romania and Hungary as well (Panushev, 2011).

As is obvious from Table 1 below in total EUR 1,244 billion PE and venture capital was invested in CEE in 2011 (or 2.8% from totally invested in Europe), the venture capital representing only 7.6% from this amount. These investments accounted for 0.105% of GDP (for Europe, this indicator being on average 0.326% of GDP). Poland, Hungary, Czech Republic, Romania, and Ukraine attracted over 90% of the total amount of CEE investments in 2011 and 70% of venture capital financed companies originated from these courtiers.

Consumer goods sector and retail trade attracted around 24% of total PE and venture capital in the region (EUR 296 mln), followed by communications (EUR 267 mln) and biotechnologies (EUR 118 mln). Around 69% of the value of the investment activity in the region represented buyout deals. In total 98 SMEs in CEE, they received PE financing (growth by 17% as compared with 2010) and 97 SMEs were financed through venture capitals (spike by over 57% as compared with 2010). On the whole, as a value the CEE venture capital market represented 2.6% of total venture capital investments in Europe and 3.3% of the number of financed SMEs in EU.

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<th>Table 1 Venture and Private Capital Investments in CEE in EUR (Unit: Million)</th>
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Trade sales remain the main way out from venture capital investments in CEE (64% of total amount of realized exit from venture investments), while 26% are sales to financial institutions and only 10% are realized initial private offerings on stock exchanges.

In a research (Stefanova, 2013) by empirical analysis of demand and supply factors of venture capital in Bulgaria, the stepwise multifactor regression established that the level of venture capital in Bulgaria is most strongly influenced by GDP, which explained about 67% of the changes at the venture capital levels. Similar high correlation between the venture capital level and the real economic growth is confirmed also in a research by Meyer (2010). The rise in GDP boosts supply of venture capitals, expands investment opportunities, and increases the number of newly started innovative SMEs. Regions with the highest concentration of venture
capitals also show high GDP levels per capital and significant innovation intensity as measured by the number of patents per capita.

Significant challenges in front of venture investments in Bulgaria from demand side include the lack of information of many SMEs managers about the advantages which this alternative form of financing brings, unrealistic expectations of Bulgarian entrepreneurs, and low innovative activity of SMEs. According to a research (Executive Agency for Encouragement of SMEs, 2011) on SMEs, financing sources in Bulgaria are less than 2% of SMEs utilized venture capital financing in 2011. The majority of SMEs (over 80%) prefer using own funds (company profits and depreciation) or loans from relatives mainly due to the uncertain financial and economic situation in Bulgaria, the considerable restrictions in bank financing, high requirements for provision of collaterals, burdensome administrative procedures in the course of obtaining funds under EU projects, etc.

Besides, from the supply side, the unregulated (grey) sector of the economy and the high levels of corruption create preconditions for unfair competition, while VCF require high degree of transparency and foreseeability of the business environment of their portfolio companies. The underdeveloped “ecosystem” for the functioning of the VCF in Bulgaria can be explained by the low level of development of the institutions for technology transfer along the triangle science-universities-industry, less developed production innovative webs, and insignificant degree of assistance of entrepreneurship.

Challenge in front of the VCF in Bulgaria remains the limited possibilities for exiting from the venture investment via the capital market. This is due to the low liquidity of the Bulgarian stock exchange, the limited trade activity, and the legal restrictions to insurance and pension funds to invest in VCF.

The expectations are the implementation of the new regulative framework of venture capitals at EU level and the adoption of the new financial instruments in the EU multi-annual financial framework for the period 2014-2020 to create the necessary conditions for obtaining critical mass for attraction of venture capitals in Bulgaria. This inevitably requires in medium term to weigh the generated benefits and costs from the public initiatives for encouraging venture capitals in Bulgaria.

From the supply and demand side of venture capitals, Romania is above the average level of CEE by the indicator GDP per capita, with low level of unemployment but weak points for attraction of venture capitals represent the low innovation activity and the insufficient R&D expenditures. According to the National Programme for Reforms of Romania for the period 2011-2013, the encouragement of venture capitals is based on support of investment projects undertaken by SMEs for a term less than two years (start-up programme) and other types of support for new investments in start-up entrepreneurial SMEs.

On the other side, the national multi-annual programme for development of entrepreneurial culture in SME sector envisages measures for financial stimulation of young entrepreneurs and business incubators. In 2011-2013, Romania initiated establishment of VCF scheme within the EU level initiative JEREMIE with a budget of EUR 100 mln, through which it aims to support the establishment of about 7-10 VCF for seed and startup investments in SMEs. Small amount of the budget will be earmarked for experimental facility regarding joint investments with webs of business angels. Another part of the funds under JEREMIE Initiative of EUR 30 mln will be utilized for transfer of technologies commercialization in seed stage SMEs and encouragement of R&D and investments in patents of over 1000 innovative SMEs.

Romania encourages SMEs with high growth potential also by grants to the amount of 80% of the value of loans under JEREMIE initiative in close cooperation with partner banks. Further steps envisaged to be
undertaken relate to the adoption of the requisite legal and regulative framework for sustainable increase in PE and venture capital investments in innovative SMEs on the basis of favorable and competitive business environment and effective utilization of structural funds under Operative Programme “Competitiveness”. The debt financing under JEREMIE in the form of guarantees amounts to EUR 150 mln in close cooperation with participating bank institutions.

Irrespective of the undertaken steps, Romania still exists such market failures as restrictive access of SMEs to alternative forms of financing and insufficiently developed venture capital segment in seed-to-expansion phase. To overcome these failures, the country envisages initiation of venture FoF structure with capital of around EUR 100 mln for encouraging investments of VCF. These funds operate under the law on capital markets and are defined as institutions in collective investment schemes.

Important advantages for attracting venture capital in Slovenia are the low taxation, the protection of investors is above the EU-15 average level; the social environment is characterized with a high level of education and comparatively low levels of corruption. The first venture capital fund in Slovenia was established in 1994 from the Austrian-Dutch company Venture Management and by 2012, the fund had made investments for EUR 16 mln in 12 portfolio companies, from which about 50% operate in the high-tech, biotechnology, and electronics sectors.

In 1995, the second venture capital fund began operation (Slovenian Fund Management) which acquires minority share mainly in medium and large enterprises and is characterized with a more passive strategy by agreeing in advance with the target company the exit strategy from the investment. By 2000, two other VCF started their activity (Prophetes and Active Venture), which invest in the telecommunications and software portfolio companies and plan their exits through initial public offerings or trade sales to strategic investors.

Main obstacles in front of the venture capital industry in Slovenia remain the rigid tax policy in respect of the long-term capital profits of the VCF and the existence of double taxation. To invest in new projects or to provide subsequent round of financing for existing portfolio companies, the target companies should prove lack of state or other tax liabilities. Important recommendations for further development of the industry relate to the need for favorable legislation, decrease of barriers for investments of pension and insurance companies and encouraging supply and demand of PE and venture capital financing.

In 2007, Slovenia adopted law on venture capital companies, which laid the legal foundation for the clarification of the legal status of companies undertaking venture capital investments. According to the said law, at least 50% of the portfolio of a given venture capital fund should be invested in SMEs, 30% in the acquisition of PE or mezzanine capital and the minimum investment of a single investor should be no less than EUR 50,000. The law envisages zero corporate tax rate for VCF having seat in Slovenia. Some amendments are made in the law on corporate taxation and the law on taxation of individuals, which provide some relief and benefits to venture capital investors. Besides, in Slovenia, it functions entrepreneurial fund as a public institution, which invests in SMEs in close cooperation with domestic or foreign companies.

The main instruments under JEREMIE initiative in Slovenia by 2013 include quazi equity/debt/mezzanine subordinated loans with a guarantee scheme amounting to EUR 175 mln, venture capital financing instruments and facilities (co-financing scheme for EUR 20 mln), investment initiative for medium enterprises for EUR 40 mln, and co-financing scheme with business angels for EUR 10 mln.
Important role for attraction of venture capital in Hungary is played by the low tax rates and the stable economic environment with low inflation, strong entrepreneurial culture, and higher R&D expenditures from EU averages. The National Agency for Development in Hungary is responsible for the implementation of the JEREMIE initiative. The total budget of the program is EUR 720 mln, of which EUR 120 are earmarked for venture capital investments. Main characteristics of JEREMIE in Hungary are the limited supply of PE and debt financing for newly established SMEs and lack of revolving facilities for technology transfer. In 2009, a procedure was initiated for establishment of Venture Capital Programme, which is expected to draw considerable interest from foreign VCF.

On the basis of a law in 2006, it established the legal framework for the utilization of the funds under JEREMIE initiative and the institutions, which administrate the investments in venture capital in seed, startup, and expansion phase. The managing body of the programme in Hungary—the National Agency for Development concludes financing agreements with MV-Venture Finance Hungary Plc (holding fund manager). The holding fund provides up to 70% of financing and the remaining 30% are attracted from private investors. Venture Finance Hungary PLC evaluates together with the National Agency for Development, the financial intermediaries, which participate in the venture capital scheme and concludes contracts with them. The maximum amount of venture capital loans is EUR 1.5 mln per target company, extended within three consecutive years’ maximum.

The regulation of VCF in Hungary is based on the law on capital markets according to which the VCF are released from corporate taxation. The company or the branch managing the venture capital fund is liable to corporate taxation according to the standard tax rates in Hungary.

Poland is in the center of activities of attracting venture capitals in CEE, but economic activity in the country is below the CEE average due to high unemployment. Yet protection of investors and corporate governance standards are above EU-15 average levels. In 2005, Poland created National Capital Fund (the first fund of funds in the country) as a holding structure, financed by the state budget (17% from total financing), structural funds of EU (74% or around EUR 80 mln under Competitiveness and Innovation Programme), and private foreign investments. The purpose of the holding fund (FoF) is to invest in VCF targeting SMEs with growth potential (with term of investment of up to 12 years). In 2008, the Ministry of the Economy of Poland started governmental initiative for reduction of existing legal restrictions over attraction of entrepreneurial capital and more specifically from SMEs. The initiative was undertaken due to the fact that seed and start-up investments are usually outside the focus of majority of PE and VCF in Poland.

The responsibility for the development of the venture capital programme in Poland is borne by the Agency for Entrepreneurial Development. The PE and venture capital investors are encouraged to invest in VCF through various forms of relief in order to mitigate the investment risks. The VCF are released from corporate taxation on the basis of the law on investment funds and the tax is paid upon pay-off of profits from the fund to the end investors. The domestic investors are liable to individual tax of 19% (unless released on the basis of concluded double taxation treaty).

The JEREMIE programme in Poland (with a budget for venture capital investments of EUR 30 mln till 2013) shows some weaknesses as still low levels of venture capital investments as a share of GDP, unsatisfactory volumes of financing in the seed to startup stages of SMEs development, the existing VCF target mainly buyout investments and later (expansion) stages of SMEs development, low R&D expenditures as a share of GDP, etc.
Conclusions

On the basis of the comparative analysis of the venture capital sector in CEE countries, the following conclusions with practical application for Bulgaria can be drawn:

(1) The venture capital industry in CEE countries represents around 2.4% of the totally attracted VCF in EU, the leading source of VCF in the region remains FoF followed by state agencies;

(2) Poland, Hungary, Czech Republic, and Romania remain leading CEE countries in attraction of venture and PE capital (exceeding 90% of the total amount of the venture capital investments in the region) mainly due to the significant advantages of the supply and demand side push-pull factors;

(3) Around 70% of the investment activities of the VCF in the region represent financing deals in the later stage of SMEs development (expansion and buyouts);

(4) For the period 2003-2011, Bulgaria occupies bottom-down position among analyzed CEE countries in attracted venture capital (total amount of EUR 1,189 mln) followed only by Slovenia (EUR 104 mln) due to existing macroeconomic and institutional barriers;

(5) Main way out of venture capital investments in CEE region remain trade sales (over 60% of realized exit deals in PE and venture capital) mainly due to the insufficient capital market capitalization and the inadequate level of development of the capital markets in the analyzed countries;

(6) The attraction of venture capital investments in CEE region is dependent upon low tax rates, stable economic environment, strong entrepreneurial activity, comparatively higher R&D expenditures, and developed “ecosystem” with well-functioning institutional structure. An important role for the establishment of the venture capital industry is played by establishment of specialized venture capital programs with functioning venture capital holding funds (FoF), as well as the opportunity for offering them corporate taxation relief (as is the practice in Hungary and other analyzed CEE countries);

(7) Protection of investors and adequate corporate governance practices, high standards of education, and comparatively low levels of corruption attract venture capital as well as the adoption of specialized legislation regulating venture capital financing (similar to the practice in Slovenia);

(8) It is necessary for CEE countries to actively use more financial instruments under JEREMIE initiative and to develop the institutional framework for venture capital industry as establishment of national VCF with financial assistance from the national budgets and the structural funds of EU for undertaking investments in VCF targeting innovative SMEs with growth potential (similar to Poland);

(9) Last but not least of paramount importance is further encouraging the exit possibilities from venture capital investments via development of niche segments at the national stock exchanges for trade in the securities of start-up and innovative SMEs with growth potential (as is the practice in the Czech Republic and Poland).

References


