4 A survey of the venture capital industry in Central and Eastern Europe

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Abstract

This chapter analyzes the integration of the European equity markets and the venture capital (VC) industry of the eight former communist countries in the Central- and East-European (CEE) region, which became EU member states in May 2004. It discusses the current state of the VC industry in the CEE region and compares it with the emerging VC industry in Western Europe and the well-developed VC environment in the United States. First results indicate the importance of an integrated European equity market and the importance of a mature VC industry. Further financial integration may improve exit channels for VC and reallocate talent and human capital. For providing an outlook on the VC industry of these particular countries, a qualitative scenario analysis is conducted. We show that the VC industry is developing quickly but some political-cultural aspects like the heritage of communism will make this process even less rapid than in Western Europe. Not the supply of sufficient VC is the main back holding factor but the demand since there is hardly any entrepreneurial spirit in these former communist countries. We conclude by offering some advice on how to alter this situation.

4.1 Introduction

On 1 May 2004, the European Union experienced an extensive enlargement. Ten new members officially joined, of which eight were formerly Communist countries from Central and Eastern Europe (CEE). These CEE countries are characterized by a large number of enterprises established only relatively recently. To grow and to survive in the strong international competition, such enterprises had to rapidly adopt essential innovative and upgrading processes.

A widespread belief exists that venture capital plays an influential role in bringing innovations to market at a rapid pace. It creates economic growth, jobs, and opportunities for further technological development (see Cochrane, 2001; Gompers and Lerner, 2001). Research by the European Private Equity and Venture Capital Association (EVCA, 2005a) shows that venture-backed businesses grow faster than others, are more profitable and dynamically increase employment.

During recent years, VC has gained considerable economic importance throughout Western European countries. However, in CEE countries young and technology-oriented companies still fail to attract the necessary capital. Several reasons can be postulated as an explanation for this difficult financing process. These are, among others, the

early development stage of the national financial markets, the insufficient availability of risk capital, as well as the low availability of financing via listing on a stock exchange. Furthermore, commercial banks fail to provide the necessary capital, as these companies have little corporate history and none or only few assets that may serve as collateral.

Research on VC and small business finance in the CEE countries is also in its early stage. It is therefore the aim of this chapter to deepen the understanding of risk capital markets in CEE countries. For the purposes of this analysis, the CEE region comprises the following countries: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.

This chapter is organized as follows. Section 4.2 gives a short overview of the financial markets of CEE and the future challenges for the financial markets in the CEE countries. Section 4.3 presents the recent experience with private equity and VC funding in the CEE region. Section 4.4 discusses an action plan and gives some policy recommendations. Section 4.5 concludes and offers some suggestions regarding possible improvements in order to create a supporting and encouraging framework for venture capital in the CEE countries.

4.2 The route of transition and the current economic environment

It is now 15 years since the CEE region started its transition towards a market economy. Privatization had the top priority in this process. The challenges were enormous: how to transfer an entire state-owned economy into private hands while at the same time maintaining political stability, economic growth, and social fairness.

In many CEE countries the fundamental institutions of a market-driven economy existed before Communism. This advantage supported the transition process, since it could rely on early historical foundations. Most CEE countries entered the accession process with developed infrastructures and, moreover, with a highly qualified workforce (see Klapper et al., 2002).

Economic reforms, market liberalization, and continued inflows of foreign direct investment (FDI) have triggered economic growth in the CEE countries throughout the last 15 years. Trade barriers were eliminated early, which supported the development of export activities. The process of privatization moved ahead and is now nearly complete. Regulation is consistent and stable and tax levels are highly competitive.

Table 4.1 indicates that growth in the CEE region has accelerated, despite the global slowdown that especially hit growth in the EU. Over the last five years, countries such as Estonia, Hungary, Poland, and Slovenia have achieved growth rates of more than 4% a year. On the other hand, wage costs have remained low at approximately 20% of EU level.

The recent economic development of the CEE region also compares well on other indicators of macro-economic performance. Table 4.1 shows that inflation in many of the CEE countries is already at, or even below, Western European levels. In 2004, only Hungary, Slovakia, Slovenia, and high-inflation-ridden Romania still had inflation rates of above 5%. On average, consumer prices in the CEE countries fell to 4.7% last year. Nonetheless, several of the CEE countries still have substantial current account deficits.

Table 4.1 Economic development of CEE countries, 2001–2004

Country	Population in million	Real GDP growth				Inflation, % average				Current account balances, % of GDP			
	2001	2001	2002	2003	2004	2001	2002	2003	2004	2001	2002	2003	2004
Bulgaria	7.9	4.0	4.0	5.0	5.5	7.5	5.8	3.0	4.1	−6.2	−3.4	−5.5	−4.6
Czech Republic	10.2	3.1	2.0	1.9	3.3	4.7	1.8	1.1	3.0	−5.7	−5.3	−5.8	−5.3
Estonia	1.4	5.0	5.0	4.9	5.2	5.8	4.3	3.6	2.9	−6.1	−10.1	−5.0	−5.1
Hungary	10.2	3.8	3.3	3.6	3.9	9.2	5.3	5.3	4.8	−3.4	−4.1	−4.8	−4.6
Latvia	2.4	7.9	6.1	5.5	6.0	2.5	1.9	3.0	3.0	−9.6	−8.7	−8.5	−7.1
Lithuania	3.5	5.9	5.9	5.3	5.7	1.3	0.3	2.1	2.5	−4.8	−5.4	−5.8	−5.4
Poland	38.6	1.0	1.3	2.6	4.1	5.5	1.9	1.1	2.4	−3.9	−3.5	−3.7	−4.0
Romania	22.4	5.7	4.9	4.9	5.0	34.5	22.5	16.2	11.6	−6.0	−3.4	−4.5	−4.5
Slovakia	5.4	3.3	4.4	4.0	4.2	7.3	3.3	8.8	7.5	−8.6	−8.2	−6.6	−6.3
Slovenia	2.0	3.0	2.9	3.2	3.8	8.4	7.5	5.7	5.0	0.2	1.8	1.9	1.7

Source: IMF (2005).

However, despite this strong economic performance, CEE countries have a significantly lower GDP per capita which equals 25% of the original EU-15 countries. Forecasts by the International Monetary Fund (IMF) (2005) suggest that the growth rate of the CEE region in the coming years will remain twice as high as the average growth rate for the EU-15 region.

The financial systems of these former communist economies have been undergoing a deep transformation since 1989. During this process literally all CEE countries have experienced a severe crisis in their banking systems. This triggered an extensive restructuring of numerous domestic banks, including even some large-scale liquidations.

The European Central Bank (ECB, 2002) notes that the financial systems of the CEE countries supply less equity investments and banking lending than in the Western European countries. The average ratio of domestic bank lending to GDP in the CEE countries is around 40%, whereas the average for the Euro area is 140%. Klapper et al. (2002) argue that SMEs suffer from underdeveloped financial systems.

Since 1999 the European Commission (EC) has been supporting capacity building in the financial markets of the CEE countries through the SME Finance Facility, funded by the Phare and Meda programs. This facility has been managed by the European Bank for Reconstruction and Development (EBRD), the Council of Europe Bank in cooperation with Kreditanstalt für Wiederaufbau (KfW), and by the European Investment Bank (EIB), which have offered credit lines to local banks for SME lending.

During recent years, private equity and VC financing has gained acceptance in the capital markets of the CEE region. With an increasing number of private equity investments and exits completed, awareness of private equity as a financing source has grown among both receivers and providers.

As argued in Section 4.3, the conditions for private equity and venture capital financing in CEE countries continue to develop in a positive way. Many former start-up companies have now become more mature market players. Both foreign and domestic industry investors show an increasing interest in buying CEE companies that received VC financing support.

4.3 Recent developments of VC funding in CEE

The VC industry in CEE is almost 15 years old. It is thus relatively young compared with the VC industries of Western Europe and the U.S., and has developed considerably since its inception. According to figures given by EVCA (2005b), during the past 15 years more than €7 billion of funding has been raised for VC funds dedicated to the CEE countries. Over 900 investments in the region were supported, from which more than 400 exits were achieved. Table A4.1 summarizes 25 successful VC-backed exits in the CEE region in recent years.

The development of VC in CEE is, however, still at a relatively early stage. This implies that many VC funds have not yet completed a full cycle of investments and exits. Therefore, overall returns of the industry may not show the true picture.

Based on data from various EVCA yearbooks, this section analyzes the recent developments in the VC industry of the CEE region. The following vital aspects are examined: fundraising activity, investment activity, investment per sector, type of investment, type

of investor, type of exit route, fund management teams, laws and regulations, and the role of public policy.

4.3.1 Fundraising activity

The CEE VC market had a very successful year in 2004. Fundraising for CEE expanded rapidly with a total of €496 million, which shows a 59% increase compared with 2003. Already in 2003 fundraising activity had increased by 28% in all of CEE to an overall value of €312 million, compared with €243 million in 2002. This positive development is mainly due to the EU accession in May 2004 and the favorable development of the global VC market.

Figure 4.1 shows that in the last 12 months a significant increase in volume occurred in Hungary, which tripled its funding, and in Poland, where an exceptional increase occurred of more than 15 times its 2003 value. On the other hand, Figure 4.1 also indicates how fragile VC fundraising can be. The Czech Republic, which saw an increase by 68% to €93.8 million in 2003, faced a drop in its VC fundraising to €4.8 million. In 2003 the Baltic States achieved an exceptional increase of more than 50 times the 2002 value, topping €105 million but this fell in 2004 to €7.2 million.

Historically, institutional investors from Western Europe and North America have been the main sources of capital for CEE private equity funds. Domestic funding sources have not yet contributed much. Looking specifically at 2004, the vast majority of funding across the CEE region was provided by non-domestic investors. Table 4.2 shows that non-domestic European sources were the largest providers of capital to CEE private equity funds, contributing €313 million of the total €496 million raised. Non-European institutions accounted for a further €110 million of funds raised, while local sources contributed the remaining €73 million.

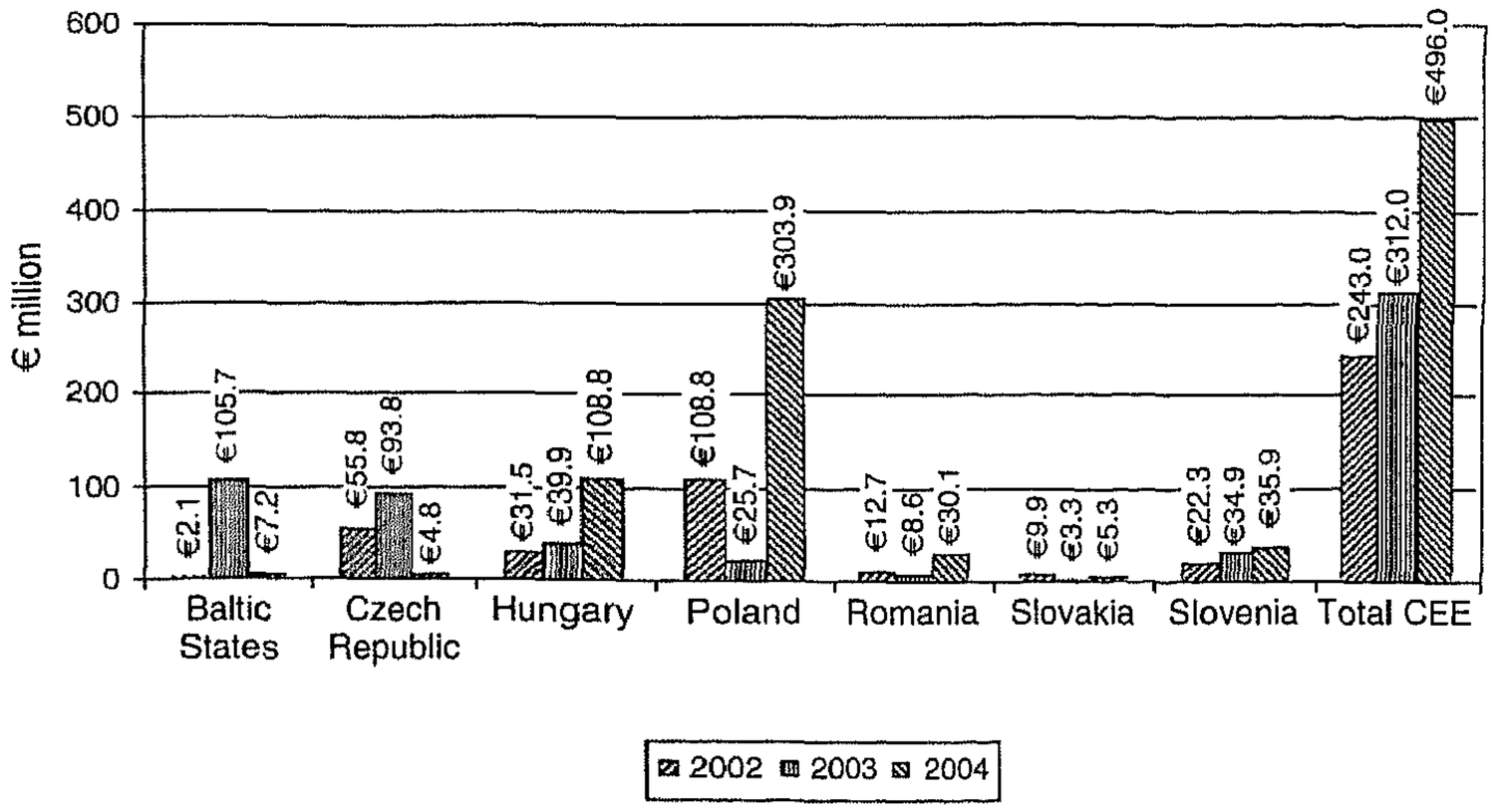

Figure 4.1 Fundraising activity, 2002–2004. *Source*: EVCA (2005b)

Table 4.2 Fundraising activity by region, 2004

€'000	Baltic States	Czech Republic	Hungary	Poland	Romania	Slovakia	Slovenia	Total CEE
Domestic	3426	4839	39013	407	–	2438	22724	72847
Other European	3425	–	69812	224438	15051	531	–	313257
Non-European	363	–	–	79036	15051	2287	13178	109915
Total 2004	7214	4839	108825	303881	30102	5256	35902	496019

Source: EVCA (2005b).

4.3.2 Investment activity

EVCA (2005b) estimates of total investment activity over the past 15 years indicate that some €5 billion of private equity was invested in more than 900 companies in the CEE region. With respect to the latest data, Figure 4.2 shows that investment levels increased significantly in 2004 with a total of €547 million invested across the CEE region. This is an overall increase of 22% compared with the €448 million invested in 2003. According to EVCA (2005b) figures, total investment for the CEE region was 64% higher in value compared with 2002.

However, the investment trends by country vary. Bulgaria has seen the highest level of investment activity by amount, primarily owing to the completion of two of the largest private equity transactions to date in the CEE region. Many of the private equity fund managers active in the CEE region participated in those transactions. Hungary and Latvia also showed increases in investment by amount, while private equity activity in Poland, the Czech Republic, and Romania decreased compared with 2003.

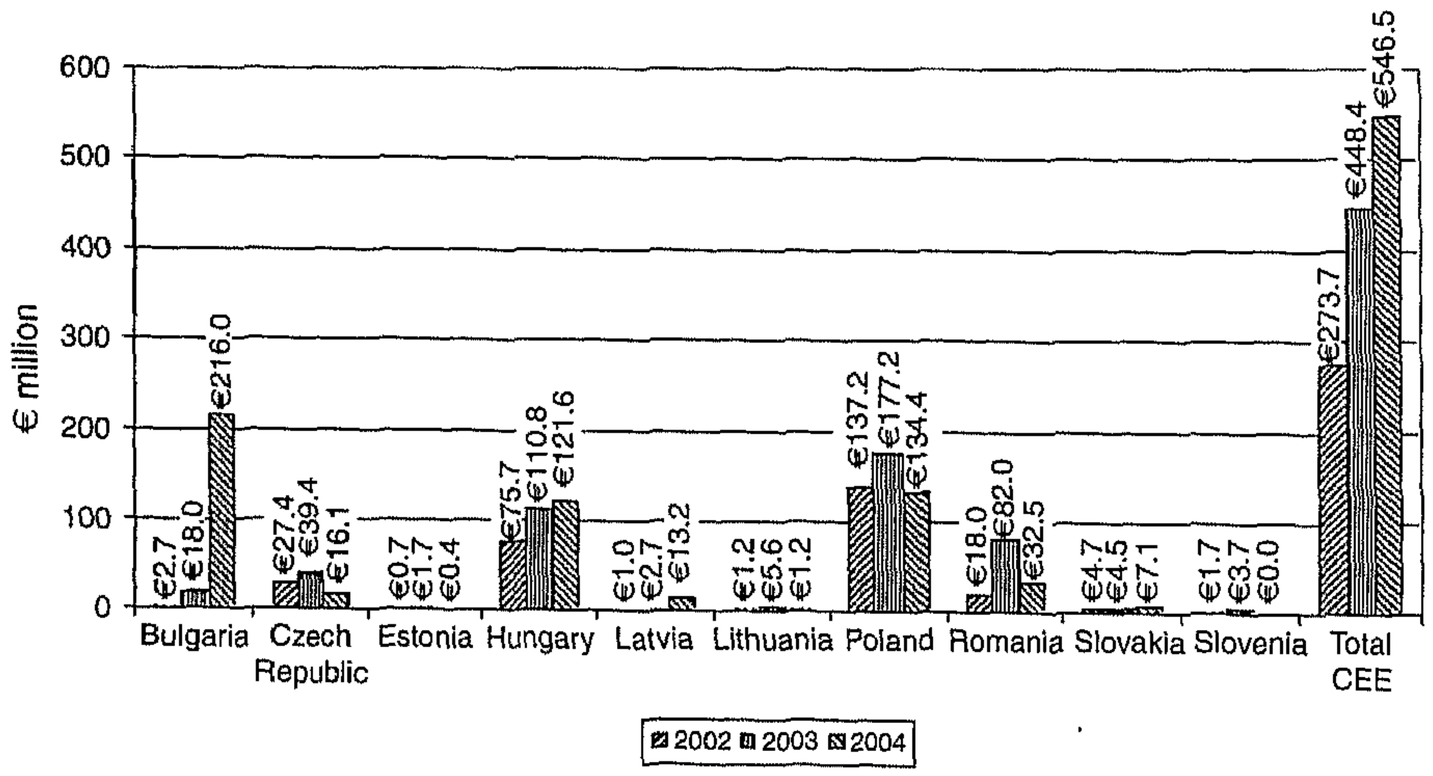

Figure 4.2 Type of investment, 2003–2004. *Source*: EVCA (2005b)

In 2004, total private equity investment in Europe was 0.284% of total European GDP. Since private equity has existed for a shorter period in the CEE region and since debt has become available to support larger transactions only recently, investment levels measured against GDP are below the European average. However, as Table 4.3 shows, the CEE region as a whole managed to increase private equity investments as a percentage of GDP between 2002 and 2004. These figures indicate that there is significant scope for potential growth in investment activity.

4.3.3 Sectoral distribution of investments

The delay in developing VC markets in CEE countries becomes more evident as one compares the sectoral distribution of investments. Table 4.4 shows that most investments in the Czech Republic, Hungary, and Poland target the telecommunication industries and manufacturers of consumer goods and industrial products. Areas such as electronics, biotechnology, medical/health, and industrial automation are more or less neglected. The share of investments in computer-related industries is much lower than the EU-15 average.

4.3.4 Type of investment

In CEE countries the provision of early-stage financing is very low. VC funds are concentrated more on larger deals, excluding the small and risky early-stage ventures. Later-stage investments and buy-outs of larger companies show more attractive returns and lower risk profiles. However, the lack of investment at the seed and early-stage financing stage can become a self-reinforcing downwards cycle. Since few venture capital funds are active in the seed and early stage, the knowledge of how to operate at such stages evaporates. This

Table 4.3 Investments as a percentage of GDP in Central and Eastern Europe, 2002–2004

€'000	Investment as % of GDP 2002	Investment as % of GDP 2003	Investment as % of GDP 2004
Bulgaria	0.016%	0.101%	1.110%
Croatia	0.014%	0.011%	0.015%
Czech Republic	0.037%	0.052%	0.019%
Estonia	0.010%	0.022%	0.004%
Hungary	0.110%	0.154%	0.150%
Latvia	0.011%	0.031%	0.120%
Lithuania	0.008%	0.036%	0.007%
Poland	0.069%	0.098%	0.069%
Romania	0.037%	0.159%	0.055%
Slovakia	0.018%	0.016%	0.021%
Slovenia	0.007%	0.015%	0.000%
Total	0.054%	0.088%	0.096%

Source: EVCA (2005b)

Table 4.4 Sectoral distribution of investments, 2001 (%)

Sectoral Distribution	EU-15	Czech Republic	Hungary	Poland
Agriculture	0.2%	0.0%	0.0%	0.0%
Biotechnology	2.9%	0.0%	0.0%	0.0%
Chemicals and Materials	2.9%	0.0%	0.0%	0.1%
Communications	13.8%	59.5%	48.0%	56.8%
Computer-related	13.3%	4.5%	4.0%	10.1%
Construction	1.8%	0.0%	0.0%	0.0%
Consumer Goods	18.5%	20.5%	0.6%	12.3%
Electronics-related	3.9%	0.0%	0.0%	0.0%
Energy	0.7%	0.0%	0.0%	0.4%
Financial Services	1.8%	0.0%	0.0%	2.9%
Industrial Automation	2.1%	0.0%	0.0%	0.0%
Industrial Products	10.0%	0.9%	24.8%	2.1%
Medical Health-related	7.9%	0.0%	14.4%	2.2%
Other Manufacturing	9.3%	14.6%	0.0%	3.3%
Other Services	5.6%	0.0%	0.9%	6.5%
Transportation	1.2%	0.0%	0.0%	0.0%
Other	4.1%	0.0%	7.3%	3.3%
Total Investment	100.0%	100.0%	100.0%	100.0%

Source: EVCA (2005b)

process does not support future entry. The few remaining seed funds and business angel investors cannot, by themselves, cover the demand of early-stage financing companies for equity investments. This can create an equity gap for early-stage companies across most of the CEE region.

Figure 4.3 shows that, as in 2003, the largest portion of invested VC went into buy-out transactions, followed by expansion capital and replacement capital in 2004. Notably,

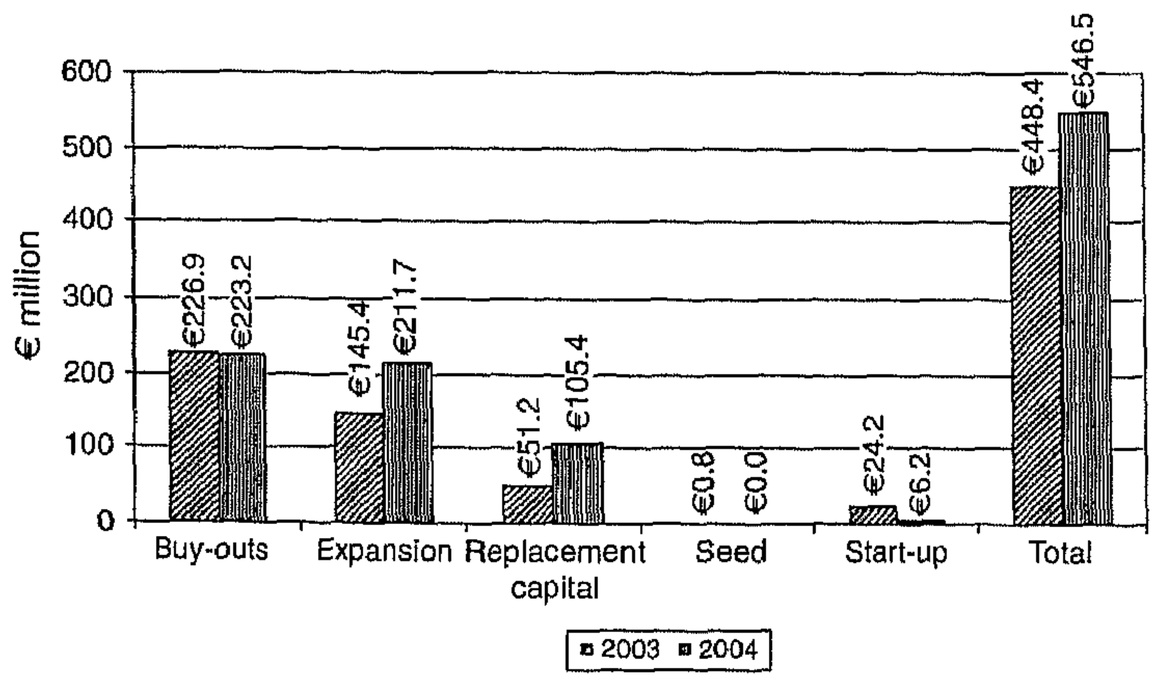

Figure 4.3 Type of investment, 2003–2004. *Source*: EVCA (2005b)

Table 4.5 Type of Investment by CEE Country, 2004

€'000	Baltic States	Bulgaria	Czech Republic	Hungary	Poland	Romania	Slovakia	Slovenia
Seed	–	–	–	–	–	–	–	–
Start-up	706	–	2245	501	–	–	947	1759
Expansion	14 102	3421	13 829	120 561	44 100	7339	6112	2262
Replacement	–	20 684	–	–	59 494	25 204	–	
Buyout	–	191 871	–	500	30 843	–	–	–
Total 2004	14 808	215 976	16 074	121 562	134 437	32 543	7059	4021

Source: EVCA (2005b)

there were no reported seed-stage investments and a significant reduction of start-up investments, which fell from €24.2 million in 2003 to €6.2 million in 2004.

Table 4.5 indicates that all CEE countries have a strong position in expansion finance. Hungary shows an unexpected high level of expansion capital, whereas this kind of investment is not yet available in the Czech Republic. On the other hand, the Czech Republic did at least experience some start-up financing in 2004. Until now, the largest investment in the CEE region was a leveraged buy-out of Bulgarian mobile operator MobilTel, completed in May 2004.

4.3.5 Type of investor

Table 4.6 indicates that Poland shows a relatively low dependency on banks in the VC funding process compared with the Czech Republic and Hungary. The importance of pension funds and insurance companies in Poland is, on the other hand, quite high. In this respect, the Czech Republic and Hungary comparably show a very low level. This slightly contradicts the image of a well-developed VC industry.

Table 4.6 Type of investor, 2001 (%)

Type of investor	EU-15	Czech Republic	Hungary	Poland
Academic institutions	0.4%	0.0%	0.0%	0.0%
Banks	21.7%	63.3%	93.3%	32.6%
Capital markets	1.3%	0.0%	0.0%	0.0%
Corporate Investor	10.9%	8.0%	0.0%	0.8%
Fund of funds	11.4%	0.0%	5.1%	7.7%
Government Agencies	5.6%	0.0%	0.0%	8.6%
Insurance Companies	12.9%	0.0%	0.0%	23.1%
Pension Funds	24.2%	0.0%	0.0%	25.7%
Private Individuals	7.4%	26.9%	0.0%	0.7%
Other	4.2%	1.8%	1.6%	0.8%
Total investment	100.0%	100.0%	100.0%	100.0%

Source: EVCA (2005b)

4.3.6 Type of exit route

More than 400 companies have been exited since the VC industry began in CEE countries. Most exits have been completed through trade sales to both international and domestic industry buyers. The Warsaw Stock Exchange particularly has proven to be a viable exit route to the public market for VC-financed companies. Also, exits have been achieved through listings on other domestic and international exchanges, including Prague, the NASDAQ, and the Vienna Stock Exchange.

Table 4.7 focuses on completed exits in 2004 and compares the types and volumes of exits across the CEE region with figures for Europe as a whole. It can be seen that trade sales and sales to management in CEE have a significantly larger share compared with the EU-15.

Figure 4.4 shows measurements with respect to investment cost. It demonstrates that the level of divestment decreased significantly in 2004 compared with 2003, while exit volumes increased by 75% in all CEE countries from 2002 to 2003 with the exception of the Czech Republic.

4.3.7 Fund management teams

Fund management teams in CEE can be separated into two sets. The first set includes regional teams that manage regional funds and typically operate with a network of offices through many countries. The second set is generated by country-focused funds that operate outside the border. Regional teams are usually larger and cover 22 of an estimated total 77 fund management teams active in the CEE countries (see Table 4.8).

4.3.8 Laws and regulations

The volume of private equity investments completed and successfully exited in the CEE region to date underlines the fact that the transformation of the legal systems and regulatory regimes has been supportive. This transformation has been mostly influenced by the

Table 4.7 Type of exit routes in CEE and EU-15, 2004

Exit value at investment cost €'000	Total CEE	Percent of total	Total Europe	Percent of total
Divestment by other means	3613	2.9%	2478200	12.7%
Divestment by public market	26198	21.4%	2306318	11.8%
Divestment by trade sale	42041	34.3%	4628477	23.6%
Divestment by write-off	21310	17.4%	1904884	9.7%
Repayment of principal loans	4582	3.7%	4165981	21.3%
Sale to another venture capitalist	5826	4.8%	2555307	13.1%
Sale to financial institution	4708	3.8%	577563	3.0%
Sale to management (MBO)	14283	11.7%	945748	4.8%
Total 2004	122561	100.0%	19562478	100.0%

Source: EVCA (2005b)

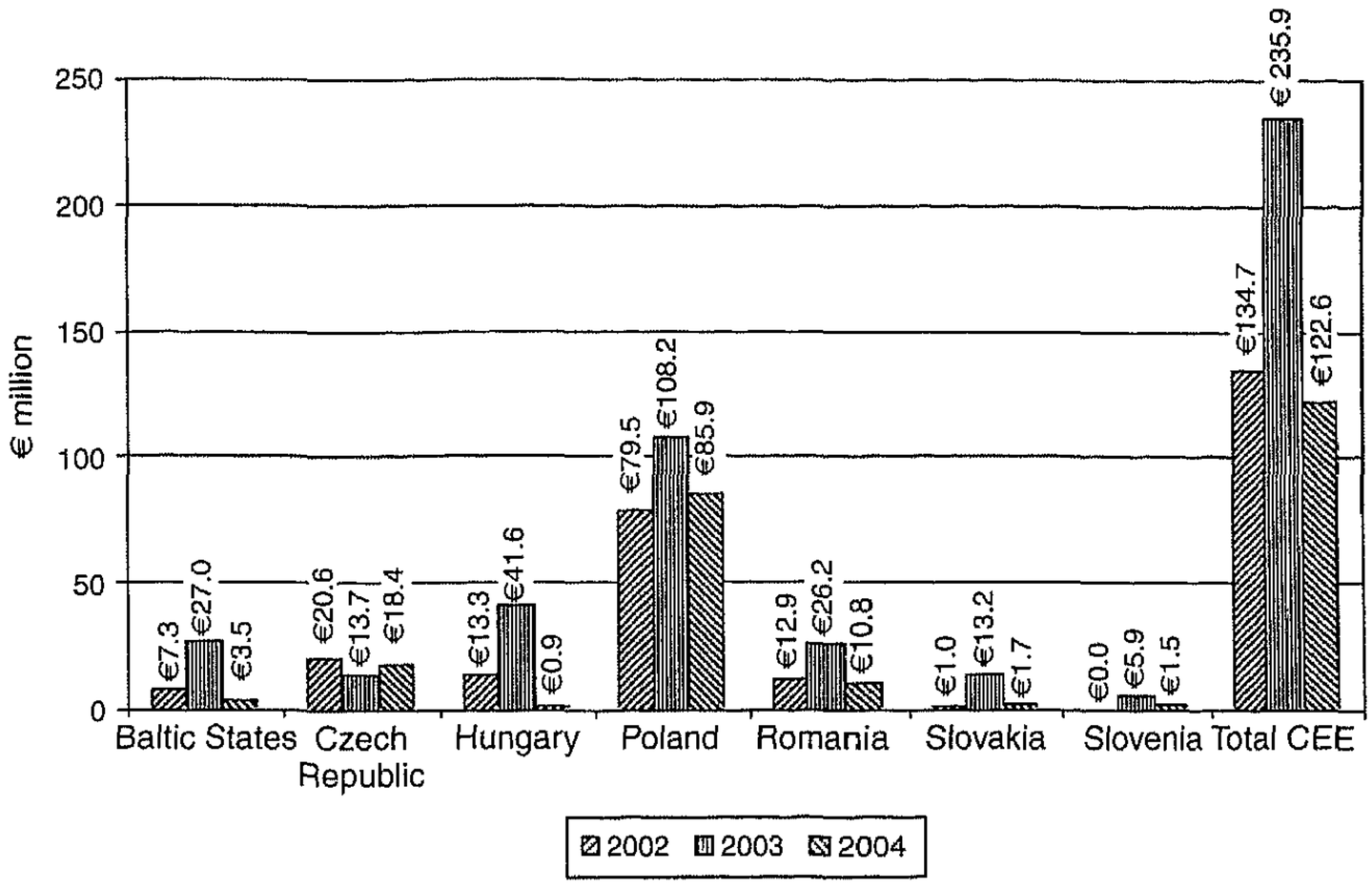

Figure 4.4 Divestments by CEE country, 2002–2004. *Source*: EVCA (2005b)

Table 4.8 Fund management teams, 2004

Country	Number of teams
Czech Republic	7
Hungary	13
Latvia	6
Poland	18
Romania	7
Slovakia	4
Regional	22
Total	77

Source: EVCA (2005b)

need to attract foreign investors. The efforts to join the EU have also been a major force for positive change.

In the CEE countries that joined the EU on 1 May 2004, the process of adopting legal codes to the requirements of the EU is quite advanced. Bulgaria and Romania, who are expected to become EU members in the near future, potentially already in early 2007, are also introducing necessary legislative changes to upgrade their legal and regulatory infrastructures to EU standards.

However, EVCA (2004) reports that the legal and tax environments in the CEE region are not yet as attractive for VC investing as in the EU-15 markets. In the CEE region the slow legal and regulatory processes, inexperienced judiciaries, and complicated bureaucracy are the major drawbacks. It is to be expected that many of these issues will be resolved through time and experience.

4.3.9 Public policies

The financial problems of start-ups also require long-term solutions involving the public sector. EU initiatives to overcome problems of SME financing such as the Risk Capital Action Plan (RCAP) and the Financial Services Action Plan (FSAP) are all steps in the right direction and should be further supported.

The introduction of the RCAP pinpointed the need for an appropriate regulatory framework for VC financing. The FSAP was designed in order to speed the establishment of an integrated market by identifying a list of actions that need to be performed.

However, the lack of progress in policy coordination produced isolated and often non-coherent measures. The implementation of the FSAP recommendations has to be done to avoid further European fragmentation.

In addition to EU initiatives, most programs and institutions of CEE countries aim to overcome the equity gap in early-stage SME finance. Table A4.2 gives an overview on various national equity schemes that support SME's access to capital.

4.4 An action plan towards a well-functioning VC market

Despite considerable advances over the last 15 years, CEE risk capital markets are functioning below their potential. This observation is underlined by long-standing market failure in seed and early-stage equity financing. As a result, potential innovations are not fully exploited and, thus, CEE countries lose out on jobs and potential growth (see Iliev, 2006).

Like any other industry, VC markets are subject to the prevailing macro- and micro-economic environment. A number of factors influence the choice of a VC fund manager: the entrepreneurial culture of a particular country, the availability of long-term sources of finance, the quality of the local educational system, the macro-economic policies adopted, and the stock market's role in financing the economy, as well as the local tax and legal environment.

This section proposes a rough outline of an action plan encouraging a well-functioning VC industry in the CEE region. Inspired by the evidence of successful venture capital industries such as in the U.S., one can distinguish between three basic dimensions for successful VC investments: the economic environment, the regulatory environment, and the social/cultural environment.

Removing barriers to allow VC industry to grow and develop across CEE is not equal to lowering regulatory standards. Removing barriers should allow legislation to support entrepreneurship and, thus, strengthen the economic and social base through increased opportunities for job creation, innovation and sustainable growth. Such an environment motivates international investors and VC fund managers to invest in the CEE region.

4.4.1 Improving the economic environment

Improving access to finance is an important aspect for fostering entrepreneurship in Europe. However, any public sector action to stimulate investment should focus on the efficiency and long-term sustainability of the VC industry. Such action should aim for programs that work with financial markets and do not crowd-out private investment.

The role of the public sector should primarily be to improve the general conditions of finance and take limited direct action only when market failures require it.

A successful economic framework needs efficient and liquid financial markets and stock exchanges to provide an exit for VC investors. This is not the case for today's fragmented European capital markets. Da Rin et al. (2005) argue that these fragment capital markets do not provide sufficient exit opportunities and hamper the rapid expansion of high-growth firms. VC investors are unable to easily sell their shares, as secondary markets are not sufficiently liquid.

Therefore, the financial industry requires improved conditions for cross-border investments so that VC would contribute to pools of capital available for firms seeking potential investors. NASDAQ in the U.S. is seen as playing a significant role in providing a nation-wide and liquid secondary market.

The setting-up of a (single) pan-European market dedicated to high-growth companies would generate an environment sufficient to attract companies, investors, financial intermediaries, and advisors. This would improve access to capital and liquidity for the best VC-backed companies and thereby would enhance growth prospects for the CEE region.

4.4.2 *Improving the regulatory environment*

CEE needs a regulatory environment that encourages entrepreneurial activities by providing consistent corporate and tax laws, efficient procedures for the set-up of new companies, and a public administration that sees itself as a service to entrepreneurs rather than a burden. In many CEE countries, the present bankruptcy rules are such that it is very difficult for an entrepreneur who has failed once to start a business again. On the contrary, in the U.S. the 'right to fail' is considered part of the learning process. Whilst protecting the interests of creditors, insolvency and bankruptcy laws should not prevent a second chance.

In order to achieve the scale and liquidity for sustainable operations, investing across European borders would be necessary for VC funds (see Da Rin et al., 2005). However, there is no suitable tax or legal structure for VC funds that is effective across Europe. Also, all European countries do not recognize the principle of tax transparency. This reduces the attractiveness of VC for institutional investors and stands in contrast to well-functioning examples such as in the U.S., where one vehicle can be used throughout the states.

Despite the fact that VC funds become increasingly more pan-European, they still have to structure themselves around 25 national tax regulatory and legal systems. This leads to double taxation, additional levels of intermediary structures, uncertainties and, thus, to increased costs for VC investors that block cross-border VC investments. In order to encourage a positive development of the VC industry, transparent pan-European fund structures need to be supported.

Taxation of VC investments affects their attractiveness. An unfavorable taxation scheme might prevent investments and thus act as a burden on economic growth. A tax environment that encourages risky investments can be favored by low capital gains tax for business angel investments, or by introducing tax breaks for eligible investments. Since tax relief schemes sometimes lead to perverse incentives that distort economic calculations, an alternative for such incentives could be a low capital gains tax rate for long-term investments, whereas shorter investments are taxed at higher rates.

Current administrative costs and legal complexity surrounding European VC investments reduce the overall amounts that an industry is able to attract and invest into growth companies. Only when the tax and legal environments of European countries are effective, can the private equity and venture capital industry contribute to the growth of the European economy.

4.4.3 Promoting a culture of entrepreneurship

The creation of an entrepreneurial spirit is a crucial dimension of a successful environment for well-functioning VC markets. EVCA (2005b) state that in many CEE countries entrepreneurs value their personal control over the company more than the growth possibilities that could be achieved by bringing in outside shareholders. This reduces the number of attractive projects on the demand side of VC finance.

Entrepreneurship education is an essential way to create a greater entrepreneurial attitude amongst young people in the CEE region. Iliev (2006) argues that educational organizations should be encouraged to give students the opportunity to develop entrepreneurial skills through high-quality courses. Especially at technical universities, for example, this could be implemented through the involvement of entrepreneurs in educational programs. Matching scientific potential with entrepreneurial skills will contribute to a better commercialization of research results through spin-offs and more start-ups in knowledge-based sectors.

Furthermore, CEE countries need to create an attractive environment for researchers, enabling interesting research results and a high number of patents. In order to achieve these goals, an intensive cooperation between universities and the economy has to be established.

Finally, as another crucial part of the social/cultural environment, people should be prepared to take risks, both as entrepreneurs and as money investors. A strong equity culture helps the financing of start-up enterprises. The attractiveness of becoming an entrepreneur may also be increased by reducing the stigma linked to business failure.

4.5 Conclusion

Despite considerable advances since the end of the Communist era, the VC industry in CEE countries is functioning below its potential. This reflects on long-standing market failure in seed and early-stage equity financing owing to problems both in the supply of, and in the demand for, risk capital. As a result, potential innovations are not fully exploited and the CEE region loses out on employment and GDP growth.

Based on data from various EVCA yearbooks, this study analyzes the recent developments in the VC industry of the CEE region by focusing on the following: fundraising activity, investment activity, sectoral distribution of investment, type of investment, type of investor, type of exit route, fund management teams, portfolio companies, laws and regulations, and the role of leverage.

In CEE countries young and technology-oriented companies still fail to attract the necessary capital. The reasons for this difficult financing process are the early development stage of financial markets, the low availability of risk capital, as well as the non-suitability of financing via the listing on a single pan-European stock exchange. Furthermore, a

pan-European fund structure would avoid inefficiencies such as double taxation and reduce the complexity of operating and managing parallel funds in multiple jurisdictions. In addition, such a workable single structure would reduce costs and time-consuming procedures associated with complicated cross-border vehicles.

This analysis also proposes a rough outline of an action plan encouraging a well-functioning VC industry in the CEE region. Inspired by the evidence of successful venture capital industries such as in the U.S., one can distinguish between three basic dimensions for successful VC investments: the economic environment, the regulatory environment, and the social/cultural environment, necessary for the creation of an entrepreneurial spirit.

Whereas the basis for the economic and legal environment can be established rather quickly, a change in the social environment and the entrepreneurial spirit takes much more time. Nevertheless, much has changed in recent years in CEE. The removal of exchange risks in the near future after the introduction of the Euro will also contribute to further European financial market integration.

To compete effectively in an ever-increasing integrated global economy, CEE countries need to improve their capacity to innovate and foster an entrepreneurial culture. Enterprise and innovation are crucial drivers of progress towards the Lisbon goal of making the European Union 'the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion'.

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Appendix

Table A4.1 25 Successful VC-backed companies

Name	Activity	Country	Private equity investors	Capital invested	Type of deal	Initial investment	Exit
@Entertainment	Media	Poland	Advent International (lead); Copernicus Capital Partners; Innova Capital	$66m	Expansion capital	1996	1999
Avonmore Pásztó	Food processing, dairy	Hungary	Euroventures Hungary; Equinox (associated with Advent)	€2.2m	Management buyout	1997	1999
Brewery Holdings	Brewing	Romania	Advent International; Jupiter Asset Management; Oresa Ventures	$28m	Expansion capital	1996	2000
Cesu Alus	Brewing	Latvia	Norway-Latvia Business Development Fund	$216 580	Turnaround	1997	1999
ComputerLand	Information technology	Poland	Enterprise Investors	$4m	Partial buyout/ expansion capital	1994	1997
Czech On Line	Internet and telecommunications	Czech Republic	DBG Eastern Europe	€6.4m	Management buyout	1998	2000
Eldorado	Food retail and wholesale	Poland	Enterprise Investors	$3.3m	Expansion capital	1999	2003

(*Continued*)

Table A4.1 Continued

Name	Activity	Country	Private equity investors	Capital invested	Type of deal	Initial investment	Exit
Elender Informatika	Internet service provider	Hungary	Advent International; Equinox	$3.2m	Expansion capital	1998	1999
Enigma	Software development	Hungary	Euroventures Hungary; Fast Ventures BV	€1.4m	Start-up	2002	2004
Euronet Worldwide	Financial services, software development	Hungary	Euroventures Hungary; Hungarian-American Enterprise Fund; Innova Capital; Advent International	$8.8m	Expansion capital	1994	Partial and full exits from 1997
GZ Digital Media	Optical disk replication	Czech Republic	Winslow Partners; Patria Asset Management; Croesus	€7.5m	Leveraged buyout	1997	1999 (Patria), 2000 (Croesus), 2002 (Winslow, partial)
HTL Group	Medical instrument manufacturing	Poland	European Renaissance Capital LP	$3m	Expansion capital	1997	2001 (partial)
Hungariocamion	Transportation and logistics	Hungary	DBG Eastern Europe; BA Capital Partners Europe	€13m	Management buyin	1998	2002
Keravit	Refractory ceramics manufacturing	Czech Republic	Czech Venture Partners	€1.25m	Management buyout	1995	2003
Lukas	Financial services	Poland	Enterprise Investors	$15m	Expansion capital	1997	2001
Mineral/ Slezkéizolacní-závody	Construction materials	Czech Republic	Czech Venture Partners	€1.1m	Management buyout	1995	2001
Overseas Express	Transport and logistics	Croatia	Copernicus Capital Partners (via Croatia Capital Partnership)	$1.3m	Expansion capital	2000	2003
Polfa Kutno	Pharmaceutical production	Poland	Enterprise Investors	$14.3m	Buyout/ expansion capital	1995	2003

Semilab	Semiconductor equipment manufacturing	Hungary	Euroventures Hungary; Hungarian-American Enterprise Fund; Venture Capital Hungary	€850 000	Expansion capital	*1992*	*1999*
Slovpak	Plastic packaging	Slovakia	Raiffeisen Ost Invest	€1.1m	Management buyout	*1998*	*2002*
Spofa Dental	Dental supplies	Czech Republic	Riverside Central Europe Fund	$8.9m (including assumed debt)	Leveraged buyout	*1998*	*2003*
Stomil Sanok	Rubber products manufacturing	Poland	*Enterprise Investors*	*$8.7m*	*Buyout/ expansion capital*	*1993*	*2003*
Town & City	Outdoor advertising	Poland	Innova Capital	$5m	Expansion capital	1996	1999
Uproar	Internet	Hungary	Euroventures Hungary	$1m	Start-up	1996	1998
Zentiva	Pharmaceuticals	Czech Republic	Warburg Pincus	$125m	Management buyout	1998	2004 (partial)

Source: EVCA (2004), see this publication for more details.

Table A4.2 National equity schemes

Country	Equity scheme	Existence	How funded?	Total funding
Czech Republic	Credit – Program of Support Businesses in Initial Development Stage	Since July 2004	Structural funds, state budget, private funds	€20m for the years 2004–2006
Czech Republic	PROGRESS – Program of Support Businesses in Development Stage	Since January 2005	State budget, private funds	€20m for the years 2005–2006
Latvia	Venture Capital for Small and Medium-Sized Enterprises	Since 1995	Grant from the Norwegian government and Alcatel Telecom Norway	$3m
Hungary	SME Development Fund	Since January 2002	Governmental and commercial banks	€13.6m
Hungary	Equity Fund for Developments in the Field of Information and Telecommunications	Since January 2002	Government	€12.4m
Hungary	Suppliers' Investment Company	Since March 2002	Government	€10m
Hungary	CORVINUS International Investment Co.	Since July 1997	Government, 3 state-owned banks	€40.6m
Poland	National Investment Fund	Since 2005	ERDF, domestic public funds	€27.8
Slovakia	Seed Capital Company	Since 1994	PHARE, state budget	213m Sk

Source: EC (2005).