THE IMPORTANCE OF THE DEPTH OF THE CAPITAL MARKET ON INTERNATIONAL VENTURE CAPITAL AND PRIVATE EQUITY ALLOCATION DECISIONS: THE CASE OF POLAND

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Abstract

This paper addresses the issue of international Venture Capital and Private Equity allocation. The study provides a discussion of the key parameters that determine the international allocation process of private equity funds. This article aims to assess the impact of the depth of the stock market in Poland on international venture capital and private equity allocation decisions. The purpose of this paper is also to focus on the investigation of venture capital and private equity investment trends in Poland.

The research methods used are based on systematic and comparative analysis of scientific literature, logical analysis and synthesis, and the analysis of statistical data and results of a questionnaire-based survey. The statistical data used in the article has been based on publications of the Polish Private Equity Association and reports of the European Private Equity and Venture Capital Association (EVCA). The information contained in EVCA reports was based on "PEREP Analytics" data. "PEREP Analytics" is a centralised, non-commercial pan-European private equity database. The "PEREP Analytics" statistics platform monitors the development of private equity and venture capital in 25 European countries.

The article reveals that Poland is similar to the other Central and Eastern European countries with respect to the ratio of private equity investment to gross domestic product (GDP), but there is a major difference which ultimately leads to its attractiveness: this is the size, number of initial public offerings (IPO) and capitalization of the Warsaw Stock Exchange. The total number of IPOs (105) which took place in Warsaw represent 40% of all IPOs in Europe in 2012. The total value of IPOs (EUR 731 million) ranked the WSE in fifth position among those exchanges operating in Europe's most developed capital markets. Research results indicate that in Poland the second most common exit route for PE funds was divestment by public offering - ϵ 36.7m in 2011.

The results will be useful to fund managers in improving their private equity allocation decisions in Central and Eastern Europe. The study focuses on the most recent period of development of the VC/PE market in Poland.

The type of the article: Research paper.

Keywords: venture capital, private equity, stock market, Poland.

JEL Classification: G24.

1. Introduction

According to the European Private Equity and Venture Capital Association (EVCA), private equity (PE) is equity capital provided to enterprises not quoted on a stock market. Venture capital (VC) is a subset of private equity and refers to equity investments made to support the early stage development phases of a business. According to Wright *et al.* (2005), VC investors provide specialized resources and economies of scale in locating and financing potentially successful ventures in risky settings, where it is costly for banks and borrowers to collaborate because of asymmetric information problems. In addition, start-ups have few tangible assets for banks to demand as collateral. Venture

capital and private equity fund investments operate through contributing outside capital, irrespective of enterprise development stage. The earlier the enterprise development stage, the larger the chance for investment failure, that is risk; but, on the other hand, the larger the potential profit.

In its statistics and reports, EVCA differentiates particular stages for VC and PE. For VC investment, the following stages are differentiated: seed, start-up, venture, and later stage venture. For the PE investment, growth capital, rescue /turnaround, replacement capital and buyout are differentiated (EVCA Special Paper 2012). Private equity has become a channel for the flow of capital and ideas internationally. The private equity industry comprises a broad spectrum of investment funds in terms of their size, legal structure and investment strategies. It can provide alternative forms of finance to traditional banking and public equity markets.

This paper addresses the issue of international Venture Capital and Private Equity allocation. The study provides a discussion of the important parameters that determine the international allocation process of private equity funds. Here we try to assess the impact of the depth of the stock market in Poland on international venture capital and private equity allocation decisions. The objective of the paper is also to analyze venture capital and private equity investment trends in Poland. The research methods used are based on the systematic and comparative analysis of scientific literature, logical analysis and synthesis, the analysis of statistical data and results of a questionnaire-based survey. The statistical data used in the article are based on publications of the Polish Private Equity Association and reports of the European Private Equity and Venture Capital Association (EVCA). The information contained in EVCA reports was based on "PEREP Analytics" data. "PEREP Analytics" is a centralised, non-commercial pan-European private equity database. The "PEREP Analytics" statistics platform monitors the development of private equity and venture capital in 25 European countries. The data for the private equity and venture capital markets of Central and Eastern Europe (CEE) include: Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia and Ukraine.

Although private equity is a form of financial investment, it does not generate systematic risk for the economy at large. It is distinguished by active management in order to make profit by enhancing the fundamental value of the private companies in which it invests in the course of an improved strategy and capital structure. This role is fundamentally important as companies face up to global competition. Private equity and Venture capital funds have been present in Poland for over 20 years. The activity of international private equity firms has been a critical factor behind the growth of Poland's private equity market. Private equity is an increasingly important factor in terms of the sums of money involved and its geographical diversity.

Investors providing PE analyze several economies for their international asset allocation. Numerous studies have examined countries' investment attractiveness according to various determinants. For example, Black and Gilson (1998) as well Kaplan and Schoar (2005) stress that well-developed stock markets, which allow investors to exit via initial public offerings (IPOs), are crucial for the establishment of active VC/PE markets. In general, stock market liquidity (calculated as stock market capitalization, turnover per session or the number of listed companies) has a significant impact on VC and PE investments. While the capital market is a very important parameter in deciding the attractiveness of a country for investment as a VC or PE asset class, there are numerous other criteria to consider.

2. International VC and PE allocation criteria

Institutional investors analyze several economic parameters (size of the economy, growth expectations, local entrepreneurial activities, legal environment – e.g. minority shareholder protection, capital gains tax rate), and estimate the individual country's attractiveness. This attractiveness is primarily determined by expectations about the ability of local VC/PE funds to perform a sufficient number of transactions with satisfactory risk and return ratios. The Global Venture Capital and Private Equity Country Attractiveness Index (Groh *et al.*, 2011) addresses

institutional investors' concerns and evaluates countries with respect to six key categories for international VC and PE allocations: economic activities, depth of the capital market, taxation, investor protection and corporate governance, the human and social environment and entrepreneurial culture and deal opportunities. According to this index (Table 1), Poland is a middle-ranking country in terms of attractiveness (36th out of 80).

 Table 1. VC/PE Country Attractiveness Index -comparison within peer group

	2007	2011
	Rank	Rank
Poland	35	36
Czech Republic	34	37
Turkey	31	39
Hungary	43	40
Slovenia	45	45
Estonia	41	49
Bulgaria	50	51
Croatia	55	52
Romania	47	60

Source: A. Groh, H. Liechtenstein and K. Lieser, The Global Venture Capital and Private Equity Country Attractiveness Index 2011. Available at: http://blog.iese.edu/vcpeindex

It is widely recognized in the academic literature that VC/PE financing decisions are affected by large information asymmetries between deal participants, the level of trust and by moral hazard problems. For example, Duffner *et al.* (2009) explain that trust among nations has a significant impact on the likelihood that a VC firm invests in a company in the specific country.

Another relevant aspect of VC/PE financing is the demand-side aspect in a regional context. Different regions can have different levels of macro-environment, investment opportunities, regional government support programs, entrepreneurship, and technological development. Awareness among small and medium-sized enterprises about VC/PE as a source of finance can also differ from region to region (Mason & Harrison, 2003). Another aspect of the demand side is whether firms are open to investment. According to Christensen (2007), while there is aversion on the part of some firms to welcome equity investors and thus lose some of their influence, many entrepreneurs who actively seek venture capital are not always "investment ready", by which is meant that suggested projects are not sufficiently developed in terms of information, business plan, organization and management. Moreover, many entrepreneurs lack the skills to present their business plan convincingly to investors. The ability to carefully assess investment proposals, achieve significant value creation and grow an enterprise requires focus on human potential management as much as the investment objective. The increasing importance of international VC/PE has been driven by the following factors:

- 1. There has been international development of VC/PE funds (established in the USA), with expansion into different geographic areas, including Europe and Asia.
- 2. Many developing nations have undertaken radical regulatory reforms, making them more favorable investment destinations for VC/PE funds.
- 3. VC/PE is emerging as an important growth engine in the transition of the former centrally planned economies of Central and Eastern Europe, especially in a country such as Poland (Wright *et al.* 2005).
- 4. Currently, there is a major shift of focus from "traditional" VC and PE countries towards emerging regions. Emerging countries attract investors by exceptional growth opportunities that require substantial funding (Groh & Liechtenstein, 2012).
- 5. The largest global PE funds follow geographical diversification by investing in enterprises operating in various countries and regions of the world. This kind of risk reduction method is commonly used in PE funds (Norton & Tenebaum, 1993).

3. Private equity investments as a percentage of GDP for Poland and selected European countries

A comparison of the ratio of PE investment activity to gross domestic product (GDP) reveals the growth level of a country's market. In 2011, the ratio of private equity investment value to GDP in the Central and Eastern European (CEE) region was 0.105%, just 32% of the Europe-wide average of 0.326% (Table 2). Poland, with an investment vs. GDP ratio slightly under 0.2% in 2011, significantly exceeded the CEE regional average.

Table 2. Private equity investments as a percentage of GDP for selected European countries, 2008-2011

	PE investment as % of GDP					
	2008	2009	2010	2011		
Czech Republic	0.294	1.010	0.133	0.089		
Hungary	0.422	0.223	0.068	0.194		
Lithuania	0.000	0.004	0.006	0.087		
Poland	0.167	0.089	0.192	0.185		
Total CCE countries (average)	0.201	0.241	0.119	0.105		
France	0.460	0.163	0.335	0.480		
Germany	0.374	0.114	0.186	0.239		
Spain	0.208	0.101	0.275	0.220		
Sweden	0.642	0.370	0.775	0.879		
United Kingdom	0.732	0.300	0.750	0.587		
Europe (average)	0.394	0.186	0.314	0.326		

Source: Own research based on data obtained from the EVCA Yearbooks 2008 -2011.

The year 2009 was exceptional for the Czech Republic (1.01%). However, in 2011, the ratio of private equity investment value to GDP in the Czech Republic was only 0.089% (Table 2). Private equity investment is just 0.10% of the CCE regional GDP, compared to 0.87% in Sweden and 0.58% in the UK (Table 2). This shows that the region has significant grow potential.

4. Private equity investment structure in Poland

Poland represents the most developed private equity and venture capital market in Central and Eastern Europe. Poland alone accounted for the largest share of investments in the region in 2011, as was the case in 2010. This country attracted €681m or nearly 55% of the total amount invested in Central and Eastern Europe (EVCA Special Paper 2012). PE firms present in Poland are growing in size and, consequently, are aiming to employ capital in larger transactions to improve deal economics. As shown in Figure 1, the average deal size has sharply increased in the last few years (from around €2 million in 2001 to €12 million in 2011). The minimum average deal value, as declared by major PE funds in Poland, is around EUR 3 million. However, some PE funds target a starting level several times higher (Sołoma & Wesołowski, 2012).

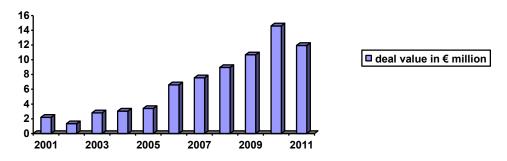


Figure 1. Deal value in Poland in the years 2001-2011

Source: Own analysis based on data from the European Private Equity and Venture Capital Association (www.evca.eu)

Polish companies attracted €680.6m of investment in 2011, a 155% increase from the very low level of 2009 during the bottom of the financial crisis (Table 3). In 2011, similar to previous years, the share of transactions into seed and start-up companies, as noted by EVCA, constituted only 1.7%.

Table 3. Type of PE investment by stage focus in Poland, 2008-2011. Market statistics (by country of portfolio company in € million)

	2008		2009		2010		2011	
	€	% *	€	%	€	%	€	%
Seed	4. 0	0.6	0.0	0.0	0	0.0	0.7	0.1
Start-up	10.7	1.7	0.0	0.0	1.5	0.2	10.7	1.6
Later-stage venture	35.7	5.6	0.6	0.2	1.3	0.2	15.2	2.2
Total Venture	50.4	7.9	0.6	0.2	2.8	0.4	26.6	3.9
Growth	69.4	10.9	61.6	23.1	114.5	17.4	162.9	23.9
Rescue/ Turnaround	0.0	0.0	6. 1	2.3	3.1	0.5	1.9	0.3
Replacement capital	0.0	0.0	0.0	0.0	16.1	2.5	0.0	0.0
Buyout	515.8	81.1	198.6	74.4	520.5	79.2	489.2	71.9
Total	635.6	100.0	266.9	100.0	657.0	100.0	680.6	100.0

^{* %} of total

Source: Own research based on data obtained from the EVCA Yearbooks 2008 -2011.

Data included in Table 3 indicate that PE funds operating in Poland attempt to reduce risk by avoiding investment in enterprises with a short activity history. At this stage, information asymmetry between PE funds and the company is particularly large. This is true especially when the management is characterized by a short management history or it is impossible to rely on signals from the market generated by the company's products because they are still non-existent.

The financing of early stages of enterprise development in Poland is similar to that in Europe (Table 4).

Table 4. Type of PE investment by stage focus in Europe, 2008-2011 Market statistics (by country of portfolio company in € million)

	2008		2009		2010		2011	
	€	% *	€	%	€	%	€	%
Seed	288 038	0.5	139 383	0.6	122 927	0.3	162 155	0.4
Start-up	2 474 558	4.7	1 862 169	8.0	1 798 070	4.3	1 794 552	4.1
Later-stage venture	3 767 816	7.1	1 795 672	7.7	1 694 807	4.1	1 705 149	3.9
Total Venture	6 530 412	12.3	3 797 224	16.3	3 615 803	8.7	3 661 856	8.3
Growth	7 322 968	13.8	4 488 503	19.3	6 373 993	15.3	5 096 498	11.6
Rescue/ Turnaround	328 657	0.6	687 412	3.0	493 515	1.2	392 224	0.9
Replacement capital	1 366 742	2.6	2 005 892	8.6	1 734 553	4.2	854 749	1.9
Buyout	37 491 079	70.7	12 266 870	52.8	29 471 202	70.7	34 087 325	77.3
Total	53 039 858	100.0	23 245 901	100.0	41 689 066	100.0	44 092 652	100.0

^{* %} of total

Source: Own research based on data obtained from the EVCA Yearbooks 2008 –2011.

This can be explained by the fact that managers of global funds that also operate in Poland act similarly here as in their home countries. Nevertheless, PE funds operating in Poland state that when making strategic decisions they are governed by their own investment policies. Evaluation of the market size, development perspectives and risk have resulted in Poland, in comparison to other Central and Eastern Europe countries, having the highest level of PE investments (€680m) focused on enterprises in later stages of development. This could indicate that PE funds evaluate Poland as a country that can cope with the global economic crisis better than other markets.

5. The Warsaw Stock Exchange – capitalization and IPOs

The Warsaw Stock Exchange (WSE) operates a regulated market of shares and derivative instruments, an alternative stock market for growing companies (NewConnect) and a debt instruments market for municipal, corporate and mortgage bonds (Catalyst). At the end of 2012 shares of 438 companies were traded on the WSE Main Market and additionally there were 429 listed companies on NewConnect. The WSE listed 51 foreign companies at the end of 2012, including 43 on the Main Market and 8 on NewConnect. In 2012, similar to other global exchanges, the WSE reported a lower value of trading in shares. The average turnover per session on the Main Market was PLN 753 million, down by 24.6% compared to the record-breaking year 2011. The total capitalization of domestic and foreign companies reached PLN 734.0 billion at the end of 2012 (http://www.gpw.pl:14. 03.13). WSE is the biggest securities exchange in Central and Eastern Europe. The success of the Warsaw Stock Exchange is supported in part by the country's pension schemes. Groh et al. (2010) stress that capital gains tax influences VC/PE activity. Capital gains earned by Polish legal persons are taxed at a flat rate of 19%. Foreign investors are generally subject to the same regulations with their tax obligations being additionally regulated by respective double taxation avoidance treaties. According to the PwC IPO Watch Europe quarterly reports for 2012, which presents the number and value of initial public offerings (IPO) on the main European exchanges, the Warsaw Stock Exchange (WSE) reported the highest number of IPOs in Europe (Table 5). The total number of IPOs (105) which occurred in Warsaw represented 40% of all IPOs in Europe in 2012. The total value of IPOs (EUR 731 million) meant that the WSE was ranked in fifth position among the exchanges operating in Europe's most developed capital markets (Table 5).

Table 5. Number and value of IPOs in European exchanges in 2012 (total alternative and regulated markets)

Exchange	Number of IPOs	Value (in EUR million)
WSE	105	731
LSE Group	79	5307
Deutsche Boerse	25	2141
NYSE Euronext	19	1038
Nasdaq OMX	17	48
Luxembourg	7	564
Spain (BME)	5	9
Switzerland	4	801
Oslo	4	291

Source: PwC, IPO Watch Europe, Q1, Q2, Q3 and Q4 2012 reports (available at: http://www.pwc.pl/pl/ipowatch-europe/index.jhtml)

However, liquidity on the Warsaw Stock Exchange as measured by the ratio of turnover to capitalization of instruments is low in Poland compared with the large stock exchanges. Kalinowski (2012) argues that the reason for the low liquidity of shares on the Warsaw Stock Exchange was the relatively large number of companies with small capitalization and low free float, whose shares were traded on this market.

6. Divestment activity

A private equity firm's goal is to invest in a private company and then sell its interest for a profit. Profits from realized investments occur as the result of "exit": a sale, public floating of the stock or merger with another firm. Kaplan & Scholaar (2005) emphasize that the main force behind VC/PE investments is IPO activity, as well as a deep and liquid stock market. However, an IPO is not always the best option for the VC/PE fund that seeks to maximize the return on each investment. An

IPO involves mandatory costs that accompany the preparation of the company to enter the stock market, such as expenses arising from the transformation of a joint stock company, the cost of admission to trading, subscription, or preparation of the prospectus. In addition, the risk associated with the IPO increases during periods of downturn in the stock market. In 2011, trade sale stood out as the most prominent divestment exit route in Poland (Table 6). The second most common exit route for PE in 2011 was divestment by public offering, amounting to €36.7m. A total of 24 companies were exited in 2011. This represents a 60% increase from the 15 companies exited in 2010.

The results of a questionnaire survey carried out among 75% of all PE funds with offices in Poland show that the development of the capital market is one of the most important criteria to be taken into account when making a decision to invest in a country (Zasępa, 2010). The most preferred forms of divestment are IPO and sale to a strategic investor. Fund managers usually choose these two forms of exit from the investment, depending on the situation of the financial markets, the condition of the company and prospective investors interested in the acquisition of the enterprise (Zasepa, 2010).

2008 2009 2010 2011 € N € N € N € N Divestment by trade sale 7.31 124.9 7 16.62 3 6.27 IPO: 0 0 0 3 a/ divestment on flotation 0.2 1 0 22.70 b/ sale of quoted equity 0.0 1 14.27 4 0.59 2 14.00 2 Divestment by write-off 2 0 36.35 1 0 2.07 0 0 Repayment of silent partnerships 0 14.46 1 0 0 0 0 0 1 Repayment of principal loans 0 0 0 0 0.39 0 26.99 4 2 3 3 Sale to another private equity house 0.58 13.25 4.10 Sale to financial institution 0 0 9.98 2 0.15 1 10.44 4 2 Sale to management (MBO) 3.62 5 0 0 19.62 4 3.53 2 2 2 0 Divestment by other means 5.16 0.33 0 0.35 69.12 19 13 77.27 15 180.41 24

Table 6. Exits in Poland, 2009-2011 (exit value at investment cost, in € million)

Total

Source: Own research based on data obtained from the EVCA Yearbooks 2008 -2011.

7. Geographic sources of funds raised for private equity

31.43

Data obtained from the EVCA Yearbooks show that the majority of PE funds raised funds outside Poland (Table 7).

2008 2009 2010 2011 Sources of new funds € × 1,000 € × 1,000 € × 1,000 % | € × 1,000 % % % Domestic 0.0 17 790 13.2 7 660 6.7 34 610 7.8 0 107 090 91.5 267 500 European 503 100 66.2 79.4 105 000 60.4 Outside Europe 248 500 32.7 10 000 7,4 0 140 480 31.8 0 0.0 2 100 1.8 "Unknown" 8 860 1.1 0 0.0Total 760 460 100.0 134 790 100.0 114 760 100.0 442 590 100.0

Table 7. Geographic sources of new PE funds raised for Poland in 2008-2011

Source: Own research based on data obtained from the EVCA Yearbooks 2008 –2011.

Domestic sources are used to a small extent. European institutional investors continued to be the main source of funds, making up 60.4% of PE funds raised for Poland in 2011. Poland registered 7.8% of total fundraising as coming from domestic sources, a level much lower than the European average (34.3% in 2011). The capital raised from domestic sources in Poland showed a

^{*} Number of companies

significant increase in absolute terms to €34.6m in 2011; from €7.6m in 2010 (Table 7). This was partly driven by government supported programs. However, there is no indication that the Warsaw Stock Exchange is used as a source of capital. When it comes to the fundraising institutions, funds of funds emerged as the leading source of capital for Poland's funds, accounting for 50.6% of total fundraising sources in 2011. Endowments, foundations and pension funds followed with 18.2% and 16.9% of the total, respectively (Central and Eastern Europe Statistics. An EVCA Special Paper, 2012).

8. Conclusions

- Poland is similar to the other Central and Eastern Europe countries with respect to the ratio of private equity investment to GDP, but there is a major difference which ultimately affects its attractiveness: the size, number of IPOs and capitalization of the Warsaw Stock Exchange. The total number of IPOs (105) which took place in Warsaw represents 40% of all IPOs in Europe in 2012. The total value of IPOs (EUR 731 million) meant that the WSE ranked fifth among the exchanges operating in Europe's most developed capital markets.
- Research results indicate that in Poland the most preferred forms of exit route for private equity managers are sale to a strategic investor and IPO. In 2011, the second most common exit route for PE funds was divestment by public offering; totaling €36.7m.
- Several factors have contributed to the growth of the international private equity market in Poland: the internationalization of capital sources, growth of GDP, need for risk diversification, deal opportunities and increasing opportunities for exiting investments due to a well-developed stock market that permits exit through an IPO.
- Research results indicate that in Poland private equity type investment in the early stages of company development, i.e., seed and start-up, constitutes only a small percentage (1.7% in 2011) of the total value of investment in this market. However, the private equity industry in Poland, by the financing of underperforming mature businesses, can be considered important for the economy.
- Data obtained from the EVCA Yearbooks show that the majority of the PE funds raised funds outside Poland. There is no indication that the Warsaw Stock Exchange is used as a source of capital.

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