

Private Equity Exits in the CEE: An Exploratory Analysis of Exit Routes and Holding Periods

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Abstract

Purpose of the article: The purpose of this article is to assess private equity exit strategies of CEE portfolio companies with regards to desired exit routes, including a cross-border deal aspect and a pre-exit holding period.

Methodology/methods: This paper employs secondary data from the Mergermarket database containing information on more than 20 thousand private equity M&A deals and IPOs. General scientific methods such as analysis, comparison or generalization were used.

Scientific aim: Only limited amount of research was carried out on the private equity exits in the region of central and eastern Europe. This study aims at shedding new light on understanding of private equity exit route decisions and timing in this particular geographic area.

Findings: Exiting a CEE portfolio company, private equity investors tend to prefer exiting via trade sales over secondary buyouts or IPOs. They also tend to prefer foreign acquirers over domestic ones. A typical pre-exit holding period averages around 5 years.

Conclusions: Our results show that while exiting a CEE portfolio company, private equity investors tend to divest by selling the company to a strategic investor (trade sales) rather than a financial investor (secondary buyouts) or exiting via an IPO. While exiting via trade sales and secondary buyouts, private equity investors tend to prefer foreign acquirers rather than domestic ones with a strong preference of acquirers from outside of the respective region. Typical holding period of a CEE private equity portfolio company remains on average in line with academic theory. Our paper contributes to the developing literature of private equity by using an extended and up to date dataset and introducing the research on the cross-border aspect of PE exit strategies.

Keywords: private equity, IPO, trade sales, secondary buy out, divestment

JEL Classification: M15, M21

Introduction

Private equity (PE) market represents one of the key players in the world's financial markets with long-term growing amount of assets under management which accounted for almost \$9,8 trillion as of July 2021 (Averstad *et al.*, 2023) compared to \$2 trillion in December 2010 (Daggett, 2022). Consequently, the growing significance of the PE industry within the world's financial markets has attracted a considerable attention of researchers, which is reflected in the developing literature (among others).

PE as an asset class could be defined as a provision of funds by institutional investors to private companies (non-publicly traded) (Cumming *et al.*, 2023). PE investments are typically carried out on a mid-to-long term basis with a serious incentive on value creation through managerial improvements (Stowell, 2010). Stowell (2010) states that the typical investment period of a PE company would be in the range of 3–7 years within which the PE managers try to fulfil their investment thesis. However, due to the heterogenous environment of the PE industry the individual holding periods can vary significantly from the typical case (Valkama *et al.*, 2013; Jenkinson, Sosua, 2015). According to empirical evidence, there are various factors influencing the PE investment period, both exogenous (PE company and portfolio company characteristics) and endogenous (market conditions) (Jenkinson, Sosua, 2015; Gompers *et al.*, 2016; Ljungqvist, Richardson, 2003).

PE entities are often established in a structure of investment funds, typically organized in a limited partnership structure with the PE firm acting in the role of a general partner and the fund's investors (often restricted to inventors somehow qualified – both *in personam* and *in pecuniam*) as limited partners. PE funds are often set up on a closed-end basis where the vast majority of the investor's profit is realized on the end of the

fund's lifetime when all the fund's positions in portfolio companies are divested. Therefore, the nature, timing and overall success of the exit from a portfolio company has a crucial impact on the PE fund's overall profit achieved (Cumming, MacIntosh, 2003a; Kaplan, Strömberg, 2009; Rigamonti *et al.*, 2016; Jenkinson, Sosua, 2015).

Omitting the liquidation of a non-performing company (write-off), there are three basic exit vehicles a PE investor can choose from (Rigamonti *et al.*, 2016; Jenkinson, Sosua, 2015, Cumming, MacIntosh, 2003a): (i) Initial Public Offering (IPO), (ii) Secondary Buy Out (SBO), (iii) trade sale (TS), where a trade sale means selling the portfolio company to a strategic (*i.e.* non-financial) buyer and an SBO stands for exiting the company through a sale to another financial investor (PE).

Exiting a portfolio company by “going public”, thus performing an IPO offering the company's stocks on the public market to a large number of investors has been in the past seen as the typical desired PE exit route (Gompers, 1996). However, recent empirical studies tend to prove otherwise (see Jenkinson, Sosua, 2015), as the IPO is consequently linked with additional costs and increased level of information asymmetry (IA), which may be lower, for example, when selling the company to a strategic investor who knows the industry well and is able to estimate the company's growth and possibly synergistic potential with lower costs (Rigamonti *et al.* 2016; Ibbotson, Ritter, 1995).

An SBO exit, meaning selling the portfolio company to another financial buyer (preferably other PE) can prove to be a suitable exit strategy mainly during periods of low interest rates (Jenkinson, Sosua, 2015). According to Achleitner, Figge (2014) the outlook of the future results and development of the portfolio company may attract the interest of larger and more experienced PEs who are able to facilitate its development in the next

stages. However, as Rigamonti *et al.* (2016) states, in case of SBO's sell-side and the buy-side PE's may tend to collude with each other to enhance their returns.

Exiting the company via a TS means sale of the company to a non-financial strategic acquirer. Typically, this would be a company engaged in the sector in which the exited company is present, for example a competitor, customer or supplier seeking to achieve appropriate synergetic effects by the transaction (Camerlynck *et al.*, 2005; Rigamonti *et al.*, 2016). Uddin, Chowdhury (2021) argue that TS transactions provide the greatest scope for minimising information asymmetry.

In this paper, I aim to provide a comprehensive overview of PE exits in the CEE with regards to desired exit routes and the typical holding periods of the portfolio companies prior the exit. The paper is further organised as follows. The next section presents a literature overview with regards to PE exit strategies. In the third and fourth sections, I perform our own deal level analysis. The last section presents the discussion of results, limitations of the study and general conclusions.

1. Literature overview

Although the motivations for choosing the appropriate exit strategy can vary for ordinary entrepreneurs, in the case of PE investors, the dominant motivation is the effort to maximise the sale price, thus its return on investment (Tykvova, 2018). There has been a fair amount of research carried out in the past 20 years regarding exit strategies of PE investors, as the PE industry is a heterogeneous environment influenced by both endogenous and exogenous factors opening a wide range of opportunities for research. Cumming, MacIntosh (2003a) investigate the relationship between the choice of various exit vehicles and endogenous features of the investment (investment duration, mar-

ket sector and quality of the exited company). In their other paper, Cumming, MacIntosh (2003b) examine the relation between the level of information asymmetry (IA) and whether the PE investor chooses a full or partial exit. In this paper Cumming and MacIntosh postulate two crucial theses in relation to IA and exit strategies in PE or VC: (i) the PE or VC investor should prefer an exit structure, that minimises the IA between the seller and the buyer, and (ii) PE and VC investors may prefer to hold the investment for a longer period of time as the IA has a tendency to decrease over time. There has been also a fair amount of research carried with regards to the differences between PE exit strategies in developed and emerging markets (for example Johan, Zhang (2016) or Cumming *et al.* (2008)). Jenkinson and Sosua (2015) analyse 1022 European PE exits and they put the choice of exit strategy in the relationship with both endogenous and exogenous factors – portfolio company and PE fund characteristics on the one hand and the overall macroeconomic conditions on the debt and equity markets on the other one. Jenkinson and Sosua find evidence for relationship between the level of experience of the PE investor, fund size, stage of the fund, size and profitability of the exited company, and macroeconomic conditions and the choice of the exit strategy. Rigamonti *et al.* (2016) investigates how industry and stage specialisation of a PE investor influences the likelihood of choosing a particular divestment vehicle (IPO, SBO or TS). Rigamonti *et al.* (2016) find evidence that both industry and stage specialization positively affect the probability of choosing to exit the portfolio investment by IPO, industry specialisation of the PE investor positively affects the probability of a Trade Sale exit and that an SBO's are most likely to be carried out by generalist investors. Uddin, Chowdhury (2021) use 20 years of PE fund data from 79 countries to examine the choice of PE exit strategies and their profitability during periods of exo-

genous shocks. Uddin and Chowdhury argue that exogenous shocks would increase the overall level of IA in the financial markets. The authors find (among other) that during periods of exogenous shocks PE investors tend to exit via TS rather than other exit vehicles, also their results show that exogenous shocks have a significant negative impact on the exit values of the portfolio companies and that these exogenous shocks such as COVID-19 pandemics or financial crisis tend affect PE exits in developed markets more than those in emerging markets.

Soloma (2014) has investigated the PE exit strategies in the CEE considering the Czech Republic and Poland. On the sample of 271 transactions from 2008 to 2012 Soloma suggests, that in the CEE PE investors tend to choose a trade sale as a usual exit route. This could be further supported by Precup (2019) who based on the PE exit data collected over 14 years suggest that exiting via Mergers and Acquisitions (including both TS and SBO) is preferred before exiting via IPO in the CEE. However, there are certain limitations to both studies as Soloma uses data from a relatively short time period for his analysis and the resulting relatively small sample of transactions. Precup, on the other hand takes into consideration only the differentiation between IPOs and M&As, thus does not differentiate between TSs and SBOs.

In this paper, I aim to build on the work of previous authors by extending the sample both by analysed period and analysed exit routes. I also employ a new factor that I consider crucial to provide a comprehensive overview of desired PE exit route in the CEE, the cross-border aspect of the deal which to my best knowledge has not yet been investigated in this scope and context.

2. Data and methodology

In this paper, I use a dataset of 847 PE exits of CEE portfolio companies over 22 years star-

ting from 1 January 2000 until 31 December 2022 collected from the Mergermarket database. Mergermarket mergers and acquisitions intelligence database delivering comprehensive market insights, run by ION Analytics, a financial news and data agency. I use data from 19 countries including Azerbaijan, Belarus, Bulgaria, Croatia, the Czech Republic, Estonia, Georgia, Hungary, Latvia, Lithuania, Moldova, Poland, Republic of North Macedonia, Romania, Serbia, Serbia and Montenegro (4 February 2003 to 2 June 2006), Slovakia, Slovenia, and Ukraine. From the initial sample of 847 PE exits, I exclude four transactions (SBO or TS) where the acquiring part of the deal was not known, thus market as an “undisclosed bidder” within the Mergermarket database. Table 1 in the following section shows the basic sample overview.

For the purposes of investigating the PE exit routes in the CEE region, I utilise general scientific methods of analysis, comparison, and generalisation with use of basic descriptive statistics in means of dispersion and location description methods, specifically, the values of mean, median and standard deviation. The MS Excel software is used for data processing. When investigating the cross-border aspect of CEE PE exits, I consider a distinguishing factor the country of registered office of the acquiring entity in case of trade sales. In the case of SBO, the determination of domicile shows to be a bit elusive as some PE funds are being established in an offshore structure (Bílek, 2021), setting the country of the registered office up as a distinguishing factor would inevitably cause bias to the results of the investigation. Therefore, in the case of SBO, I consider a main distinguishing factor a presence of an office in the respected country and the CEE region. In case of IPO, I do not assess the cross-border aspect, as due to the heterogeneous nature of IPO investors the cross-border aspect is not assessable.

The research on the CEE private

equity pre-exit holding periods presented in the fourth section is based on the original sample of 847 PE exits from the Mergermarket database. However, not all cases allow me to accurately determine the length of time the exited companies have been in the portfolio. I therefore create a sub-sample of 171 TSs, SBOs and IPOs for which I can accurately determine the holding period of the company in the portfolio from initial acquisition until the exit. The created sub-sample is analysed with use of basic methods of descriptive statistics in means of dispersion and location description methods, specifically, the values of maximum and minimum values in the sample, average, mean and standard deviations. The results of the analysis are subsequently used for generalisation.

In order to facilitate clarity, tables showing the sample and sub-sample are presented in the relevant chapters, where they are followed by follow-up tables and graphs.

3. Private equity exit routes in the Central and Eastern Europe

Using the sample of 843 PE exits over 22 years described in Data and methodology, this section investigates PE exit routes in the CEE in means of choice of the exit vehicle and also the cross-border aspect of the exit (*i.e.* whether the acquirer of the PE portfolio company was a domestic or a foreign investor). The cross-border aspect investigation is subsequently taken further to distinguish

Table 1. Sample description: Nationality of portfolio companies, exit routes and cross-border aspect (numbers).

	Country	Frequency	Percentage	Exit vehicle			
				IPO	TS	SBO	Cross-border
1	Azerbaijan	1	0.12%	0	1	0	1
2	Belarus	7	0.83%	0	7	0	5
3	Bulgaria	33	3.91%	0	28	5	28
4	Croatia	17	2.02%	0	12	5	12
5	Czech Republic	149	17.67%	4	121	23	97
6	Estonia	48	5.69%	3	41	4	35
7	Georgia	3	0.36%	1	2	0	0
8	Hungary	48	5.69%	1	39	8	33
9	Latvia	38	4.51%	0	36	2	24
10	Lithuania	43	5.10%	1	36	6	29
11	Moldova	5	0.59%	0	5	0	5
12	Poland	270	32.03%	31	201	38	141
13	Republic of North Macedonia	2	0.24%	0	2	0	2
14	Romania	84	9.96%	1	69	14	68
15	Serbia	10	1.19%	0	6	4	8
16	Serbia and Montenegro (4 Feb 2003 to 2 Jun 2006)	1	0.12%	0	1	0	1
17	Slovakia	46	5.46%	0	38	8	28
18	Slovenia	11	1.30%	0	8	3	8
19	Ukraine	27	3.20%	0	26	1	20
	Total	843	100%	42	679	121	545

Source: Mergermarket.com, c2023; Author's own study.

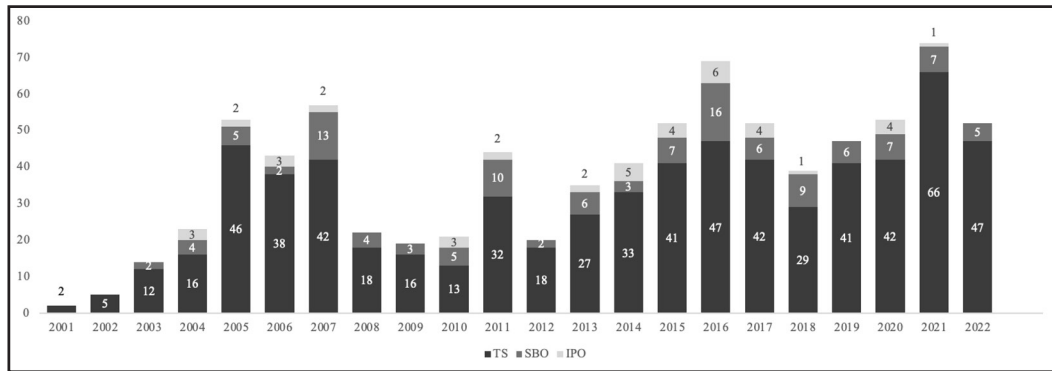


Figure 1. Summary statistics: Number of exits and exit routes in each analysed year. Source: Mergermarket.com, c2023; Author's own study.

Table 2. Summary statistics: Number of exits, exit routes and cross-border transactions in each analysed year.

	Total	TS	SBO	IPO	Cross-border	Domestic
2000	6	6	0	0	6	0
2001	2	2	0	0	2	0
2002	5	5	0	0	3	2
2003	14	12	2	0	10	4
2004	23	16	4	3	17	3
2005	53	46	5	2	41	10
2006	43	38	2	3	31	9
2007	57	42	13	2	34	21
2008	22	18	4	0	10	12
2009	19	16	3	0	13	6
2010	21	13	5	3	12	6
2011	44	32	10	2	25	17
2012	20	18	2	0	16	4
2013	35	27	6	2	19	14
2014	41	33	3	5	18	18
2015	52	41	7	4	30	18
2016	69	47	16	6	38	25
2017	52	42	6	4	37	11
2018	39	29	9	1	28	10
2019	47	41	6	0	25	22
2020	53	42	7	4	37	12
2021	74	66	7	1	52	21
2022	52	47	5	0	39	13
Average	36.65	29.52	5.30	1.83	23.61	11.22
Median	41.00	32.00	5.00	2.00	25.00	11.00
St. Dev	20.47	16.74	3.99	1.87	13.67	7.40

Source: Mergermarket.com, c2023; Author's own study.

Table 3. Summary statistics: Cross-border exits breakdown by buyers' affiliation to the CEE region.

	Total	CEE Acquirer	Non-CEE Acquirer	CEE Acquirer [%]	Non-CEE Acquirer [%]
Cross-Border Exits Total	545	94	451	17.25%	82.75%
Cross-Border TS	451	59	392	13.08%	86.92%
Cross-Border SBO	89	35	54	39.33%	60.67%

Source: Mergermarket.com, c2023; Author's own study.

shing between CEE and non-CEE investors. Table 1 provides a basic sample description regarding the nationality of analysed portfolio exits, used exit vehicle in terms of IPO, SBO or trade sale (TS) and in the case of an SBO or TS, a cross-border aspect of the transaction.

From the sample, I was able to collect data over 679 trade sales, 121 secondary buyouts and 42 IPOs. 545 of the trade sales or SBOs were conducted with a foreign investor on the acquiring side, therefore a cross-border transaction. As of the nationality of the exited companies, the largest representation in the sample had Poland with 274 deals (32.24% of the total), Czech Republic with 150 deals (17.65% of the total), and Romania with 85 TSs, SBOs or IPOs (10% of the total), accounting together for nearly 60% of the sample. Table 1 provides a comprehensive summary of the researched sample in terms of the nationality of the exited companies, and the selected exit routes and the cross-border aspect of the deals.

Figure 1 shows the spread of the sample across each analysed year, taking into account the selected exit route. Table 2 extends the data from Figure 1 on the cross-border aspect. Over the analysed 22 years, on average (mean) 36.65 (41.00) PE exits were executed annually with TSs having the largest average annual share 29.52 (32.00) followed by SBOs 5.30 (5.00) and IPOs 1.83 (2.00). Regarding the cross-border aspect, the results also show that cross-border TSs and SBOs were preferred with an average annual number 23.61 (25.00) followed by domestic transactions with an average annual number of 11.22 (11.00).

Table 3 shows the cross-border exits sample breakdown by the factor, whether the foreign acquirer belonged to the CEE region. From the 545 cross-border transactions 82.75% were carried out with a non-CEE foreign acquirer. Only 17.25% of the foreign acquirers were investors from the CEE region. When dividing the sample into TS and SBO, it is evident that the tendency to prefer a non-CEE acquirer is slightly more evident in the case of the sale of the company to a strategic investor, where the division between CEE and non-CEE acquirers is in the ratio of 13.08% to 86.92%, whereas in the case of SBO, this ratio is milder, 39.33% to 60.67%.

Taking into account the graphic representation of the sample over time from Figure 1 and also the descriptive statistics from Table 2, it is clear that in the sample the PE exit activity has been fairly volatile in the CEE in the past 22 years. The standard deviation of the total amount of annual exits reaches 20.47, which compared with 36.65 average annual number of exits shows a high level of overall volatility. Investigating the number of exits each year there is apparent a relatively low activity in the first four investigated years, this could be a result of the fact, that the all the countries in the sample were formally a part of the Eastern Block therefore, the market economy did not start to develop there until the beginning of the nineties. This hypothesis can be further supported by Lazarevski *et al.* (2013) who analysed PE and VC investments development in the CEE. Analysing further years, a slowdown in exit activity during the financial crisis period between 2008 and 2012 is

evident within the trail of data. This could further support Uddin, Chowdhury’s (2021) finding that exogenous shocks drive PE firms to delay the exit decision. However, the same effect is not apparent during the period of COVID-19 pandemics. Nevertheless, we can’t omit that Uddin, Chowdhury (2021) point out that this effect shows to be rather milder in the emerging markets compared to developed ones.

4. Private equity pre-exit holding period in the Central and Eastern Europe

Within PE research, one of the key limitations is the limited availability of information, which stems from the fact that it is a private market, within which the publication of information is often limited. Within the originally used dataset of 847 exits, I am not able to accurately determine the length of time the exited companies have been in the portfolio in all cases. Therefore, I created a sub-sample of 171 TSs, SBOs and IPOs for which it is possible to determine the holding period of the company in the portfolio until the exit. For compiling the sub-sample, I use transactions from the originally used dataset of 843 PE exits presented in Table 1.

Table 4 shows the whole sub-sample of 171 PE exits spread according to the exit route used. The sub-sample consists of 132 TSs, 31 SBOs and 8 IPOs with the overall average (mean) holding period of 61.98 (58.00) months. From the point of view of particular exit routes, the longest average

(mean) holding period before exiting the company could be found in companies that are subsequently sold to strategic investors via TSs, followed by companies exited via IPO and SBO, nevertheless the overall average PE holding period of a company from investment to exit tends to take approximately around 5 years in the CEE. However, the sample shows a high level of standard deviation of 37.40 months with an eminent variance between the minimum (3 months) and maximum (176 months) value of the sample. Therefore, as much as the average holding period of a PE portfolio company in the CEE would be in accordance with the usual investment period indicated by academic authors (for example Stowell, 2010) in the range, between 3–7 years, my results also show that this holding period could be significantly shorter or longer. The author’s hypothesis is that this could be a result of the heterogenous nature of the PE industry, where some PEs could be established as investment funds vehicles operating on a closed-end basis, therefore having a limited asset holding period and some PEs managing only their funds, thus having a broader flexibility regarding the holding period. This also gives support to Jenkinson, Sosua’s (2015) findings that PEs tend to use various “windows of opportunity” on the market when timing the exit of a portfolio company and timing the exit decision.

Table 5 shows the spread by the nationality of the sub-sample which is align with the original sample, therefore Poland, the Czech Republic, and Romania accounting for the majority of the analysed dataset

Table 4. Summary statistics: PE holding period statistics in the CEE – spread by exit route (in months).

Exit route	Frequency (No.)	MIN	MAX	Average	Mean	St. Dev
Whole sample	171.00	3.00	176.00	61.98	58.00	37.40
1 TS	132.00	3.00	176.00	62.86	59.00	39.46
2 SBO	31.00	12.00	146.00	58.94	58.00	30.46
3 IPO	8.00	18.00	100.00	59.13	54.50	27.99

Source: Author’s own study.

Table 5. Summary statistics: PE holding period statistics in the CEE – spread by nationality of the exited company.

	Country	Frequency	Percentage	Holding period (months)				
				MIN	MAX	Average	Mean	St. Dev
1	Bulgaria	4.00	2.34%	13.00	87.00	53.75	57.50	31.93
2	Croatia	3.00	1.75%	67.00	106.00	92.33	104.00	21.96
3	Czech Republic	41.00	23.98%	3.00	176.00	50.93	49.00	36.70
4	Estonia	7.00	4.09%	14.00	71.00	47.00	58.00	24.14
5	Hungary	8.00	4.68%	16.00	122.00	62.63	51.00	34.33
6	Latvia	2.00	1.17%	83.00	86.00	84.50	84.50	2.12
7	Lithuania	3.00	1.75%	24.00	107.00	78.67	105.00	47.35
8	Moldova	1.00	0.58%	29.00	29.00	29.00	29.00	N/A
9	Poland	66.00	38.60%	6.00	162.00	62.61	54.00	37.25
10	Romania	23.00	13.45%	13.00	150.00	75.00	80.00	41.58
11	Serbia	1.00	0.58%	52.00	52.00	52.00	52.00	N/A
12	Slovakia	9.00	5.26%	12.00	156.00	65.22	53.00	40.94
13	Slovenia	2.00	1.17%	53.00	71.00	62.00	62.00	12.73
14	Ukraine	1.00	0.58%	134.00	134.00	134.00	134.00	N/A
	Whole sample	171		3.00	176.00	61.98	58.00	37.40

Source: Mergermarket.com, c2023; Author's own study.

(76.03%). The original sample consisted of 19 countries, but from 5 countries there were no available holding period data available, therefore the sub-sample consists only of data from 14 countries as listed in Table 5.

5. Conclusion

Using a new comprehensive dataset of 843 PE exits from 19 CEE countries between 2000 and 2022 I find strong support for results of previous research such as Soloma (2014), Jenkinson, Sosua (2015) or Precup (2019) regarding the desired PE exit routes. This paper provides a deal-level analysis of PE exit strategies used in the CEE in terms of exit vehicle used and the cross-border aspect of the deal. Using a sub-sample of 171 PE exits we analyze the typical holding period of a PE portfolio company from investment to divestment.

The performed analysis suggests that the most common exit route for a CEE based PE

portfolio company is the sale of the company to a strategic acquirer via TS followed by sale to another financial acquirer via an SBO and taking the company public via IPO. Researching the cross-border aspect of CEE private equity exits via TSs and SBOs, I find that the most common acquirers are foreign investors from outside the CEE region. In the case of exit of a portfolio company to a foreign strategic investor, almost 9 out of 10 investors are from outside of CEE. In the case of SBOs, the ratio is a milder, but non-CEE investors are still preferred, with over 6 out of 10 foreign financial acquirers being outside of CEE. According to my findings, when exiting a CEE portfolio company, PE investors tend to prefer selling, thus obtaining the maximum sale price, to a foreign strategic acquirer. Analysing the holding periods of a PE portfolio companies from the sample, I find that on average the holding periods are in line with the academic literature provided for example by Stowell (2010), as the average holding period accounts for

approximately 5 years for all three investigated types of exit vehicles. My analysis indicates that on average, PE investors tend to keep their portfolio companies for the longest period when exiting via TS, followed by IPO and SBO. However, the sample shows a fairly high levels of volatility which brings support for findings of Jenkinson, Sosua (2015) and Uddin, Chowdhury (2021), who argue that PE investors tend to use the “windows of opportunity” where on one hand they may sell the portfolio companies relatively early when an appropriate opportunity arises and on the other hand prolong the holding period accordingly when they see an ongoing opportunity for additional value creation or a positive market outlook for the future. This paper therefore contributes to the developing literature of private equity by

using an extended and up to date dataset and introducing the research on the cross-border aspect of PE exit strategies.

I recognise several limitations of this research, mainly, my analysis considers deal-level data only from the CEE. I believe the narrative power of our research could be enhanced by comparing the data from the CEE with data from other European countries to better recognize the CEE market specifics. The second limitation stems from the relatively low number of deals in the sub-sample researching the holding periods of PE portfolio companies. Unfortunately, due to the nature of the PE industry where much information is commonly kept private is this limitation hardly omittable. I therefore welcome further research in this area.

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