

Foreign listing pricing effects. The case of emerging economies

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Abstract

Together with global financial integration processes, companies from emerging markets gained access to foreign stock exchanges also through the issue of the depositary receipts. The aim of this paper is to examine the price reaction on the domestic stock exchange in response to cross-listing on foreign stock markets. To do so, we employ the event study method and investigate the pricing effects of 272 depositary receipts listings of companies from 12 emerging economies. Based on the non-parametric tests, we found that issuing depositary receipts generates statistically significant negative abnormal returns on the domestic stock market two days before the listing day. On the contrary, the results of the parametric test revealed negative but non-significant abnormal returns during the pre-listing period. We interpret our findings as evidence of non-positive market reaction and decreasing significance of the cross-listing decisions for the domestic shareholders.

Keywords: cross-listing, emerging economies, event study

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1 Introduction

From a company's perspective, the process of global financial integration broadens the potential sources of capital through the vehicle of cross-listing, among others. The term indicates that a company is listed both on the domestic and foreign stock exchange (Karolyi 2006; Peng, Blevins 2012; Peng, Su 2014), which may be attained through dual listing of securities (i.e. equities) or depositary receipts (DR).

In the prior literature, most researchers underlined and quantified the benefits and the valuation gains from listing shares abroad. Those papers measure market reactions using an abnormal market return and emphasise a positive abnormal return (AR) both before and on a listing day. More recent studies, however, have shown that positive capital market outcomes from cross-listing are temporary, and that the valuation of a cross-listed firm decreases during the post-listing period. Moreover, some empirical studies have shown that ARs on pre-listing and listing days are negative, which may suggest that commonly discussed theories for explaining the benefits of cross-listing are not suitable for contemporary international market conditions, especially after the recent global financial crisis. Therefore, our research question is how cross-listing affects the domestic valuation of companies from emerging economies. Consequently, the aim of this paper is to investigate the price reaction on the domestic stock exchange in response to cross-listing on stock markets in the United States.

In this paper, we conduct an event study analysis and calculate both the average cross-sectional ARs and the average cross-sectional cumulative abnormal returns (CARs). The event period is comprised of 11 days, providing -5/+5 days around the DR issue day. We limit the analysis to DR that were issued in the United States by companies from selected emerging economies after 2008. Since the 1980s, the US market has been the biggest host market for cross-listed shares (Sarkissian, Schill 2016). Therefore, we believe that the recent global financial crisis may have changed the domestic shareholders' perceptions of cross-listing in the United States and possibly contradict the results of the earlier studies.

The contribution of the paper is two-fold. It firstly examines the market reaction in emerging markets towards cross-listing after 2008. To the authors' knowledge, few studies have investigated cross-listed shares in the twenty-first century. Secondly, the study is based on a large sample of firms from emerging economies from 12 countries, which is much more extensive than recent similar studies.

This paper is structured as follows: a literature review of the market reaction and the impact of cross-listing on shareholders' wealth is presented in section 2; the sample that was used in the empirical analysis is discussed in section 3; the research design and findings of this study are discussed in sections 4 and 5; and the conclusions and implications for further research appear in section 6.

2 Literature review

Many studies have explored market reactions on cross-listing, including both short-term and long-term abnormal market returns. In the literature, two primary methods are used to show a cross-listing's effects on a firm's value: the event study (Foerster, Karolyi 1999; Miller 1999) and the authors' comparison of cross-listed companies with domestic companies that do not issue DR (Doidge, Karolyi, Stulz 2004; Doidge et al. 2009). The earlier studies, in general, found a positive response regarding the cross-listing date, which usually occurred by a significant run-up in stock prices during the pre-listing

period and a decrease after the listing (Alexander, Eun, Janakiramanan 1988; Foerster, Karolyi 1993; Miller 1999; Serra 1999; Korczak, Bohl 2005; Roossenboom, van Dijk 2009).

The first study concerning market price reactions of cross-listed companies was conducted by Alexander et al. (1988). The authors investigated the price reactions of 34 firms in 6 countries that were listed on either the NYSE, AMEX or the Nasdaq between 1962 and 1982 using the CAR method. They divided the analysed countries into two groups: Canadian firms and non-Canadian firms. In the second sample, the authors observed a positive CAR by 17% when it was annualised 2 years before the listing and 33% over the 3 years following the listing. The authors found that the CAR for Canadian firms was significantly lower, which reflected higher market integration between the US and Canada. This problem was also investigated in the research of Foerster and Karolyi (1993). Based on a sample of 52 Canadian firms that were cross-listed between 1980 and 1990, the authors confirmed significant positive ARs during the 100-day pre-listing period and negative ARs during the post-listing period. In addition, positive relations between cross-listing and the domestic market share prices were noted by Miller (1999) when he conducted an analysis of 181 firms from 35 countries, both developed and emerging, which had issued DR between 1985 and 1995. Miller found that the market reaction was significantly related to the DR venue. The largest ARs were for firms that had listed on the major US stock exchanges, which the author claims were due to indirect barriers that segment capital markets. An interesting contribution to the literature was made by Roossenboom and van Dijk (2009), who analysed 526 cross-listing firms from 44 countries on 8 stock exchanges to determine whether the destination market influences the abnormal domestic return (ADR). The authors noticed that cross-listing on the more developed capital market created more value for domestic shareholders. They also found that the highest AR was for firms that were cross-listed on the NYSE and Nasdaq, followed by London, and they were lower for continental Europe and Tokyo.

One of the first studies on cross-listing's influence on shareholders' wealth in emerging economies was conducted by Serra (1999). The author studied 70 firms from 10 emerging economies between 1991 and 1995 and confirmed the same pricing pattern that was observed in developed economies. The author found positive abnormal returns both before and on a listing day and negative ARs of -3% to -5% during the post-listing period. In a later study of Korczak and Bohl (2005) the authors investigated the reaction of domestic market stock prices and the trading volume of a cross-listed company in Central and Eastern European (CEE) countries. The average cumulative abnormal return over 300 days regarding the DR issue reached approximately 26% in CEE countries. Interestingly, the increase in stock prices did not disappear immediately after the first listing day. As Korczak and Bohl's (2005) study encompassed companies from the CEE region only, it seems that such a geographical limitation would prevent the generalisation of conclusions on other emerging economies.

Conversely, more recent studies that have focussed mainly on firms from emerging economies have shown that the domestic market reaction on cross-listing is not always positive and that ARs are either non-significant or negative around the listing day (Smirnova 2004; Wang, Chung, Hsu 2008; Kayali, Çelik 2009; Tripathy, Jha 2010, Chaturvedula 2018). In a most recent study, Chaturvedula (2018) investigated 79 cross-listed Indian companies, and found that cross-listing had a negative impact on the shareholders' wealth with a negative AR during the pre-listing phase. The suggested reasons for the negative ARs were a decrease in the liquidity on the domestic market and an increase in transaction costs. Comparable studies on Indian and separately for Russian firms were earlier conducted by Tripathy and Jha (2010) and Smirnova (2004), who also confirmed significant negative ARs on the cross-listing

dates. Furthermore, based on the sample of cross-listed Asian firms, Wang et al. (2008) confirmed that cross-listing did not significantly influence the domestic shareholders' value. The same results were obtained by Kayali and Çelik (2009) for the Turkish stock market and revealed non-significant market reactions during the pre-listing period.

The literature proposes several theoretical explanations of the valuation gains for cross-listing firms. The first is the market segmentation hypothesis, which was initially discussed in terms of cross-listing by Alexander et al. (1988). The authors argued that higher barriers between the stock market may lead to a higher rate of return being required by investors and consequently an increase in the cost of capital. Cross-listing limits this barrier and reduces the cost of capital. Serra (1999) claimed that, if capital markets are segmented before the cross-listing, the market reaction should be positive around the listing date because firms' values increase. Moreover, in the long run, the AR should be negative because expected returns are lower. According to Miller (1999), the size of valuation gains depends on the level at which the domestic market is integrated with the world financial market. Thus, higher ARs should be observed among firms from emerging economies. However, according to Karolyi (2006) market segmentation theory has several difficulties as a theory for explaining the valuation gains for cross-listing firms. As Karolyi (2006) argues, ARs obtained in event studies are generally too small to gain any explanatory value. Moreover, authors notice that the ARs are also observed for firms from countries that are integrated with the world market.

In line with the second theoretical proposition – the liquidity hypothesis – cross-listing may improve the market performance of a company by increasing its trading volume and the market competitiveness (Foerster, Karolyi 1993). As Mittoo (1992) argues, increasing liquidity through trading volume is one of the most significant benefits of cross-listing.

Surprisingly several empirical studies have shown that cross-listing does not always exhibit an advantage in the domestic market. A study among East African companies conducted by Makau, Onyuma and Okumu (2015) proved that although cross-listing can influence a firm's stock liquidity that impact is not statistically significant in most cases. Moreover, based on a sample of Latin American firms, Silva and Chavez (2008) found that cross-listing did not always bring a liquidity advantage in comparison to non-cross-listed stocks. Finally, Chaturvedula (2018) suggested that growing liquidity in a foreign market due DR issue may decrease liquidity in the domestic stock exchange.

Cross-listing as a signal of the company's strong commitment to higher investor protection is the third theoretical explanation of cross-listing decision. The so-called bonding hypothesis, which was introduced by Coffee (1999, 2002), points out that bonding the firm with higher corporate governance standards is the most important benefit and motivation of cross-listing. Following Stulz (1999), information asymmetry and the importance of corporate governance are key drivers of the cross-listing decision, whereas Lang, Lins and Miller (2003) and Doidge, Karolyi and Stulz (2004) further suggested that cross-listings in countries with higher corporate governance standards improve a shareholder's protection along with the quality of the companies' information policy. Thus, the bonding hypothesis is especially justified for emerging economies, where corporate governance standards differ significantly.

Nevertheless, regarding the processes that occurred on the financial markets in recent decades, the explanatory power of the bonding hypothesis might have been affected. Due to financial integration processes, increasing activity of institutional investors, and as a result of the recent financial crisis, among others, many of developed and developing economies have improved their regulatory environment, including corporate governance. Indeed, Cumming, Johan and Lee (2011) indicate that

European stock exchanges amend trading rules as an endorsement of the MIFID regulation. Moreover, Cumming et al. (2017) denote increased corporate governance mobility, which is related to the endorsement of monitoring technology and regulations originated in other's jurisdictions.

3 Sample characteristics

In this paper, we used data from cross-listed firms from emerging markets, which were selected according to the IMF classification (IMF 2019). To ensure comparability of the results across countries, we only analysed DR issues from countries with at least five cross-listed firms, including Argentina, Brazil, Colombia, Egypt, Indonesia, Mexico, Philippines, Poland, Russia, South Africa, Turkey and Thailand (Table 1 in the Appendix). Thus, companies from countries that issued fewer than five DR-issuing companies during the period 2009–2018 were excluded from the sample. The period of the study covers the years 2009–2018 and the analysed companies' share prices as well as the main index quotations were downloaded from Eikon database.¹

Initially, a dataset of 332 issues was collected.² The compiled database underwent a preliminary analysis, and issuances by private companies and those that listed DRs within a short period of time (180 days) after an IPO in the domestic stock market were eliminated. Eventually, the dataset included 272 cross-listings from 12 emerging markets. The number of new cross-listings in the analysed sample was the largest in 2009 (64 new issues). The most active on the DR market were firms from Brazil (56) and Russia (53). However, in Russia, the majority of DRs were listed by private firms; therefore, in the final sample, the number of firms that were included in the analysis was limited to 15.

Our analysis was based on abnormal market returns on the effective issue date versus the cross-listing announcement date. There is an ongoing discussion in the literature regarding whether, in the case of cross-listing, the stock price reaction should be measured via either the listing date or the announcement date. Miller (1999), Doidge, Karolyi and Stulz (2004) and Roosenboom and van Dijk (2009) claim that in an efficient market investors' expectations impact the stock price immediately; therefore, the announcement date responds better to the scope of the cross-listing market reaction analysis. By contrast, Foerster and Karolyi (1999) noted problems with identifying the announcement date because the information is usually delivered by media, meaning that not every shareholder gains the information immediately. In a more recent study, Korczak and Bohl (2005) noticed that in the case of emerging economies there is no direct announcement effect because the decision about cross-listing is usually announced far ahead of the listing. In the case of our research sample, finding the exact announcements in local and international news providers was extremely difficult and the collected dates were not sufficiently reliable. Thus, in order to avoid sample bias, we follow Korczak and Bohl's (2005) arguments and employ effective issue date in calculations.

¹ Data obtained from Eikon Refinitiv Database under the partnership agreement between the University of Gdańsk and Refinitiv.

² Bank of New York Mellon (2018), www.adrbnymellon.com/directory/dr-directory; Global DR Directory (2018), depositoryreceipts.citi.com.

4 Methodology

The chosen empirical strategy – event study – is common for the analysis of dividends and financial reports announcements, mergers and acquisitions, change of CEOs as well as other significant corporate events (Gurgul 2012; Pieloch-Babiarz 2016; Mrzygłód, Nowak 2017; Byrka-Kita, Czerwiński, Preś-Perepeczo 2018; Kaźmierska-Joźwiak 2019). To validate the significance of the market reaction, we calculated both the average cross-sectional ARs and the average cross-sectional CARs and employed either parametric or non-parametric tests, depending on the obtained return distributions. The event period was comprised of 11 days, providing -5/+5 days around the DR issue day ($t = 0$). The calculation of the ARs was based on the continuously compounded returns and on the single-factor market model. Thus, the daily ARs and CARs were calculated according to the following formulas:

$$AR_{it} = R_{it} - (\alpha + \beta R_{mt}) \quad (1)$$

and

$$CAR_i(t_1, t_2) = \sum_{t_1}^{t_2} AR_{it} \quad (2)$$

where R_{mt} is the market rate of return that is reflected by the broad stock market index, and t_1 and t_2 reflect other days within the -5/+5 event window. The averages of the cross-sectional daily and CARs were equal to the following:

$$\overline{AR}_t = \frac{1}{N} \sum_{i=1}^N AR_{it} \quad (3)$$

$$\overline{CAAR}(t_1, t_2) = \frac{1}{N} \sum_{i=1}^N CAR_i(t_1, t_2) \quad (4)$$

Furthermore, following the discussion provided in Gurgul (2012, p. 51), the correction for the standard deviation of the ARs and CARs was employed, allowing for a solution to the problem of a simultaneous change of the denominator and numerator in the standard t-statistics. Thus, the standard deviation of the daily ARs was calculated as follows:

$$\hat{\sigma}^2 = \sqrt{\frac{1}{T-1} \sum_{t=t_0}^{t_0+T-1} (\overline{AR}_t - \overline{\overline{AR}})^2} \quad (5)$$

where T is the number of days, and t_0 indicates the first (i.e. oldest) observation for the chosen (-180; -6) day's estimation window, whereas the $\overline{\overline{AR}}$ was calculated as follows:

$$\overline{\overline{AR}} = \frac{1}{T} \sum_{t=t_0}^{t_0+T-1} \overline{AR}_t \quad (6)$$

Thus, following Gurgul (2012, p. 51), the t-statistics were equal to the quotient of equations 3 and 5. The same steps were applied to the CARs. Additionally, having considered the distribution asymmetry of the daily ARs, the non-parametric sign test and the Corrado rank test (Corrado 1989) were employed. Both tests do not require meeting strict assumptions regarding the AR distributions (Cowan 1992; Fiszeder, Mstowska 2011). The generalised sign test allows for independence across the ARs to be checked, and it verifies whether the frequency of the positive ARs is equal to 50% (Rani, Yadav, Jain 2016). Thus, the test statistic was defined as follows:

$$z = \frac{Np - E(Np')}{\sqrt{Np'(1-p')}} \quad (7)$$

where p and p' stand for the observed and expected fraction of the positive ARs, respectively (Gurgul 2012, p. 52).

Moreover, equation 7 can also be expressed in a shortened form:

$$z = (2p - 1)\sqrt{N} \quad (8)$$

knowing that $E(Np')$ is equal to $0.5N$, which refers to the randomness assumption of the ARs. The non-parametric Corrado rank test statistic takes the following form:

$$T(u) = \frac{N^{-1} \sum_{i=1}^N (K_{it} - \bar{K})}{\hat{\sigma}(K)} \quad (9)$$

where K_{it} is the rank of AR_{it} for the period $t = 1, 2, \dots, T$. The average rank \bar{K} is computed from:

$$\bar{K} = \frac{1+T}{2} \quad (10)$$

while the standard deviation of ranks $\hat{\sigma}(K)$ is computed as follows:

$$\hat{\sigma}(K) = \sqrt{T^{-1} \sum_{t=1}^T T^{-1} \sum_{i=1}^N (K_{it} - \bar{K})^2} \quad (11)$$

5 Results

The statistics of ARs within the -5/+5 event window regarding the depositary issue day are presented in Table 2 (Appendix). The mean value of the ARs was the lowest for the ($t = -2$, -0.46%) and the highest after the event day ($t = +1$, -0.28%). Surprisingly, the mean cross-sectional ARs for the entire event were

not different from zero, which was supported by the results of the t-student statistics. The results from Table 2 also indicate that the ARs in this sample are not normally distributed; therefore, we argue that this may influence the t-statistics' results.

In Table 3 (Appendix), the statistics of the CARs for the depositary issue days are presented. Again, the CARs lack statistical significance, yet they have a clear pattern (see Figure 1, Appendix). The results of the Shapiro-Wilk test raise questions about the validity of the results and the correctness of the conclusions. Therefore, a more appropriate approach demands the use of non-parametric tests.

The summary of the findings of the generalised sign and the Corrado rank tests are given in Table 4 (Appendix). The obtained results for the T(u) statistics indicate that the market reaction was negative and statistically significant two days before the issue day ($t = -2$) at the 0.05 significance level. The abnormal returns for all other days within the event window were not different from zero. Moreover, the proportion of positive ARs was significantly lower than 0.5 two days before ($t = -2$) and the issue day ($t = 0$).

The obtained findings draw the conclusion that the domestic stock market reaction during the pre-listing period was found to be either non-significant or slightly negative. Similar findings were noticed by Chaturvedula (2018), Wang et al. (2008), Smirnova (2004) and Tripathy and Jha (2010). Thus, in the case of the companies from the emerging market countries, cross-listing after 2008 has not positively impacted domestic shareholders' wealth.

However, our results contradict the large body of literature that shows a significant positive market reaction to cross-listing (Foerster, Karolyi 1993; Miller 1999; Serra 1999; Korczak, Bohl 2005). We explain this difference in results by the fact that the majority of the empirical studies that reveal the positive ARs were conducted in the 1990s and in the beginning of the twenty-first century. Since that time, the global capital market has undergone numerous changes, including the financial crisis in 2008, which may have changed investors' perceptions of cross-listing in the United States. Moreover, the more positive ARs that were obtained in the prior literature were generally limited to the emerging economies (Miller 1999; Serra 1999). This notwithstanding, the stock exchanges within this group of countries have also integrated with the global market and increased the corporate governance standards. Thus, the governance advantage that was derived from cross-listing in the United States or the United Kingdom, in the case of many emerging economies, may have decreased.

6 Conclusions

Despite the decrease in the number of cross-listed shares from both developed and emerging markets, cross-listing is still an interesting phenomenon. The greatest interest in cross-listing, per the literature, occurred in the 1990s, together with the growing number of DRs issues. Many studies were devoted to the benefits of cross-listed companies, including the domestic market reaction. The empirical evidence of that time suggests that the shares of cross-listed firms tended to experience positive ARs during the pre-listing period and on the listing date and negative AR during the post-listing period. More recent studies have shown that ARs in the emerging market are neither significant nor negative, both during the pre-listing period and on the listing date.

In this paper we investigated the influence of cross-listing on domestic stock prices and encompassed companies from 12 emerging economies. The size of the research sample was more

extensive than recent studies on cross-listing in emerging market countries. Our results confirm that the significance of cross-listing for domestic shareholders is declining, and the market reaction is not clearly positive. As such the decreasing benefits of cross-listing may impact the firm's motivation to cross-list. Therefore, further theoretical and empirical analyses are needed, including cross-country and cross-sector analyses.

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Appendix

Table 1
Number of cross-listings in selected emerging markets 2009–2018

Country	Number of DR issues										Total
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Brazil	8	5	4	5	8	3	5	6	9	3	56
Russia	7	14	12	x	4	5	x	3	8	x	53
Indonesia	14	7	4	8	1	1	1	x	x	x	36
South Africa	12	1	2	2	12	x	1	2	1	1	34
Thailand	x	x	12	17	x	1	x	x	2	x	32
Philippines	4	1	2	7	10	2	2	1	1	x	30
Turkey	6	x	3	x	4	5	2	x	2	x	22
Mexico	2	1	4	3	1	3	2	5	x	x	21
Poland	8	1	2	4	3	x	x	1	x	x	19
Egypt	2	x	x	2	x	x	3	2	4	2	15
Argentina	1	x	1	x	1	x	x	1	4	1	9
Colombia	x	x	x	1	3	1	x	x	x	x	5
Total	64	30	46	49	47	21	16	21	31	7	332

x – no issues

Source: data based on the Bank of New York Mellon DR Directory (2018) and Global DR Directory (2018).

Table 2

Summary of the statistics for the cross-sectional daily ARs around the DR issue day

Day	Mean	Std. dev	Min	Max	Kurtosis	Skewness	t-stat	SW	p-value
-5	0.0015	0.0258	-0.1023	0.1299	5.0910	0.3445	0.07635	0.9262	0.0000
-4	-0.0019	0.0313	-0.3064	0.0888	34.7967	-3.8156	-0.10044	0.75429	0.0000
-3	0.0016	0.0258	-0.1368	0.1291	8.0559	0.3796	0.08374	0.87732	0.0000
-2	-0.0046	0.0274	-0.2021	0.0832	14.7577	-2.4606	-0.23984	0.8053	0.0000
-1	-0.0002	0.0227	-0.1038	0.1037	4.0396	0.3792	-0.01067	0.9379	0.0000
0	-0.0018	0.0268	-0.1671	0.1171	7.6404	-0.5501	-0.09356	0.8899	0.0000
1	0.0028	0.0299	-0.1563	0.1928	9.8140	1.0526	0.14467	0.8625	0.0000
2	0.0002	0.0237	-0.1551	0.1020	8.8634	-0.3006	0.01241	0.8916	0.0000
3	0.0016	0.0229	-0.0930	0.1077	3.4721	0.4082	0.08408	0.9530	0.0000
4	0.0015	0.0231	-0.0863	0.1178	5.0460	0.8811	0.08057	0.9056	0.0000
5	-0.0002	0.0236	-0.1132	0.1775	13.8016	1.6011	-0.00850	0.8615	0.0000

*, ** and *** – significance at the 10%, 5% and 1% significance levels, respectively.

Source: own elaboration.

Table 3

Statistical significance of the cross-sectional CARs around the DR issue day

(t_1, t_2)	Mean	Min	Max	Std. dev.	t-stat.
(-5; 0)	-0.0054	-0.5976	0.1921	0.0741	0.8481
(-4; 0)	-0.0069	-0.5014	0.1722	0.0644	0.7373
(-3; 0)	-0.0050	-0.1983	0.1700	0.0502	0.5752
(-2; 0)	-0.0066	-0.2389	0.1644	0.0424	0.4859
(-1; 0)	-0.0020	-0.1848	0.1406	0.0355	0.4066
0	-0.0018	-0.1671	0.1171	0.0268	0.3068
(0; 1)	0.0010	-0.1777	0.3098	0.0417	0.4771
(0; 2)	0.0012	-0.2072	0.3432	0.0467	0.5351
(0; 3)	0.0028	-0.1949	0.4341	0.0537	0.6154
(0; 4)	0.0044	-0.2284	0.5519	0.0622	0.7121
(0; 5)	0.0042	-0.2380	0.5136	0.0640	0.7324

*, ** and *** – significance at the 10%, 5% and 1% significance levels, respectively.

Source: own elaboration.

Table 4

Results of the Corrado test and the generalised sign test for the cross-sectional daily ARs around the DR issue day

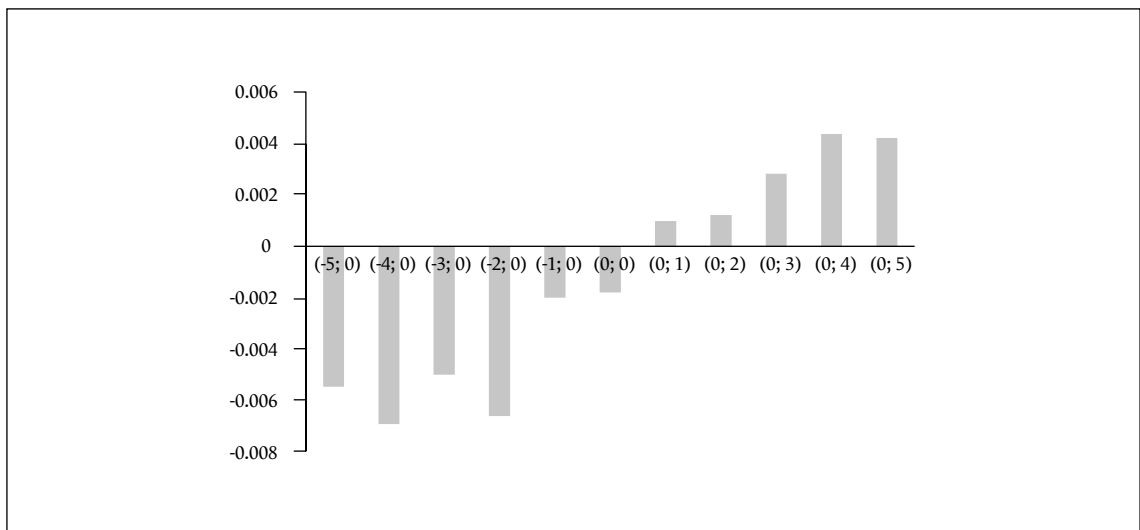
Day t	T(u) stat.	z stat.
-5	1.3038	0.8489
-4	0.4410	-0.8489
-3	0.4218	0.1213
-2	-2.1283**	-2.1828**
-1	-0.0959	-0.3638
0	-1.7832	-3.0317***
1	1.0546	0.4851
2	-0.4027	-0.6063
3	1.0738	0.8489
4	0.6711	-0.8489
5	-0.5561	-1.0914

*, ** and *** – significance at the 10%, 5%, and 1% significance levels.

Source: own elaboration.

Figure 1

CARs in the event window (-5, +5) days around the DR issue



Source: own elaboration.

Notowania na zagranicznych rynkach giełdowych a wycena akcji. Przypadek gospodarek wschodzących

Globalny proces integracji finansowej ułatwia przedsiębiorstwom możliwość zdobywania nowych źródeł kapitału. Jedną z dostępnych form stanowi cross-listing, w którym spółka jest przedmiotem obrotu zarówno na krajowej, jak i na zagranicznej giełdzie papierów wartościowych. Cross-listing może przyjąć jedną z dwóch form, z których pierwsza polega na bezpośrednim notowaniu papierów wartościowych na zagranicznej giełdzie, druga zaś oznacza emisję walorów określanych jako kwity depozytowe (Karolyi 2006; Peng, Blevins 2012; Peng, Su 2014).

We wcześniejszej literaturze przedmiotu dominowało przekonanie, że pojawienie się spółki na zagranicznej giełdzie dostarcza jej nie tylko dodatkowego kapitału, lecz także niesie korzyści o charakterze korporacyjnym. Decyzje o cross-listingu powinny być zatem pozytywnie oceniane przez inwestorów na krajowym rynku giełdowym. Alexander, Eun i Janakiramanan (1988), Foerster i Karolyi (1993), Miller (1999), Serra (1999) oraz Korczak i Bohl (2005) wskazują na występowanie statystycznie istotnych dodatnich nadwyżkowych stóp zwrotu z akcji zarówno przed, jak i w dniu rozpoczęcia cross-listingu, co sugeruje, że inwestorzy pozytywnie oceniają decyzję spółki o emisji walorów na giełdach zagranicznych i dostrzegają korzyści zarówno dla spółki, jak i dla siebie. Niemniej jednak w nowszych opracowaniach, które obejmowały również spółki pochodzące z tzw. gospodarek wschodzących (*emerging economies*), korzyści wynikające z notowania na zagranicznych giełdach papierów wartościowych nie są już tak przekonujące. Smirnova (2004), Wang, Chung i Hsu (2008), Kayali i Çelik (2009), Tripathy i Jha (2010) oraz Chaturvedula (2018) zwracają uwagę na brak istotnej reakcji rynku kapitałowego, a nawet na uzyskiwanie ujemnej nadwyżkowej stopy zwrotu w odpowiedzi na rozpoczęcie notowań za granicą.

Niejednoznaczność wyników może wskazywać, że cross-listing nie jest mechanizmem przynoszącym inwestorom oczekiwane korzyści, szczególnie w przypadku spółek z gospodarek wschodzących. Również kryzys finansowy z 2008 r. ujawnił niestabilność rynków kapitałowych państw wysoko rozwiniętych i wpłynął na ich atrakcyjność dla zagranicznych spółek. Skłania to zatem do postawienia pytania, w jaki sposób cross-listing wpływa na wycenę spółek z gospodarek wschodzących na ich krajowym rynku akcji.

Przyjętym celem niniejszego opracowania jest ocena reakcji cen akcji na rodzimej giełdzie papierów wartościowych w odpowiedzi na rozpoczęcie notowań na giełdach w Stanach Zjednoczonych. Badanie przeprowadzono na próbie 272 kwitów depozytowych wyemitowanych w latach 2009–2018 przez spółki z 12 gospodarek wschodzących, mianowicie: Argentyny, Brazylii, Egiptu, Filipin, Indonezji, Kolumbii, Meksyku, Polski, Republiki Południowej Afryki, Rosji, Tajlandii oraz Turcji.

Ocenę reakcji cen akcji oparto na metodzie analizy zdarzeń, w ramach której wyznaczono nadwyżkowe stopy zwrotu w odpowiedzi na rozpoczęcie notowań na zagranicznym rynku giełdowym. W badaniu przyjęto 11-dniowe okno zdarzenia (-5; +5), a oczekiwane stopy zwrotu wyznaczono zgodnie z jednoczynnikowym modelem rynkowym. W zależności od rozkładu nadwyżkowych stop zwrotu do zbadania ich statystycznej istotności wykorzystano parametryczne lub nieparametryczne testy statystyczne.

Wyniki przeprowadzonych badań wskazują, że reakcja lokalnych inwestorów analizowanych spółek w okresie poprzedzającym emisję kwitów depozytowych była albo statystycznie nieistotna, albo

negatywna, co pokrywa się z wynikami prezentowanymi w nowszych badaniach nad wyceną spółek emitujących kwity depozytowe (Chaturvedula 2018; Wang et al. 2008; Smirnova 2004; Tripathy; Jha 2010). Uzyskane wyniki pozwalają na stwierdzenie, że w przypadku krajów rozwijających się decyzja spółki o emisji walorów na zagranicznych giełdach papierów wartościowych ma coraz mniejsze znaczenie dla inwestorów. Z jednej strony postępująca integracja tych rynków z globalnym rynkiem finansowym oraz poprawa standardów ładu korporacyjnego zmniejszyła korzyści z emisji kwitów depozytowych na giełdach w Stanach Zjednoczonych. Z drugiej zaś strony rynek finansowy w gospodarkach rozwiniętych w ostatnich dziesięcioleciach przeszedł radykalne zmiany, stając się tym samym mniej atrakcyjny dla spółek z gospodarek wschodzących. W konsekwencji zmniejszające się korzyści z cross-listingu mogą istotnie wpłynąć na motywację spółek do emisji papierów wartościowych na zagranicznych giełdach.

Słowa kluczowe: cross-listing, gospodarki wschodzące, analiza zdarzeń

