



## **Wealth Effects from Banks Mergers and Acquisitions in Eastern Europe**

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### **ABSTRACT**

The main objective of the current study is the examination of the wealth effects emanating from the announcement of mergers and acquisitions (M&As) in Eastern Europe that took place between 1995 and 2015. In specific, the main objective of the paper is the examination of the stock price reaction of both bidders and targets to the announcement of M&As. The method of payment is another aspect that is considered when assessing the wealth effects of M&As. To gauge market reaction, we use both the standard event study methodology and regression analysis. The results show that targets gain significant abnormal returns around event periods, while acquirers seem to earn trivial excess returns. Moreover, cash disbursements in bank M&As boost price appreciations around event dates. The results from regression analysis reveal that the determinants of abnormal returns are the market competitiveness, method of payment, and relative size.

**Keywords:** Mergers, Acquisitions, Wealth Effects, Abnormal Returns, Eastern Europe

**JEL Classifications:** G11, G14, G21, G34

### **1. INTRODUCTION**

The European financial sector has witnessed dramatic changes in the last two decades as a result of the enactment of the second banking directive, the introduction of Euro as the common European currency and the adoption of the Capital Requirements Regulation and Directive. Furthermore, market de-regulation and harmonization of banking systems have resulted into banking concentration in all important banking markets, including the European one. However, the pace of changes in Eastern European countries was a little bit more dramatic after the collapse of the communist regimes which led to the opening of these markets and offered new opportunities for European banks. The influx of Western European banks into the financial sector of the Central and Eastern European countries (CEE) was notable in an attempt to gain attractive new business in these markets. This trend increased when the first countries from Eastern Europe applied for membership and finally joined the European Union (EU) in 2004 (Fritsch et al., 2007). The immediate consequence of the above structural changes was the increase of investment interest in CEE countries through a wave of mergers and acquisitions (M&As).

In a nutshell, the opening of the banking sector in Eastern Europe was the new El Dorado for M&A activities.

Though the announcement effects of M&As are one of the most extensively topics in banking and finance literature, the majority of prior studies have showed a preference to Western Europe leaving under-researched the wealth effects emanating from bank M&As in Eastern Europe. Eastern Europe presents many idiosyncracies not observed in the Western Europe such as the newly developed economic system, the transition from a centrally planned economy to capitalism, the different legal and institutional environment and the degree of competition in the market for corporate control. Therefore, Eastern Europe's bank industry could be considered a good laboratory to gauge market reaction to bank M&A announcements that could provide useful to academics and practitioners alike.

A key issue in any M&A transaction is whether the transaction is likely to create value for the shareholders of the acquiring firm. What matters is whether the stock market reacts positively to the transaction in the short-run and, more importantly, whether the

acquirer's stock outperforms its peers in the long-run. Based on the above, the main objective of the current study is to assess the short-run market reaction to the announcement of bank M&As. For this purpose, an up-to-date sample of 69 bank M&A deals is considered for a period spanning from 1995 to 2015 in Eastern Europe. Employing the classical event study methodology, we compute excess returns surrounding M&A deals for both bidding and target banks. Our results aim at contributing to the pertinent literature by bringing new evidence from a market that has recently opened and is still under structural changes. Moreover, this is the first study that analyzes market reaction to bank M&As in Eastern Europe by taking into account the method of payment. In line with prior evidence, target shareholders seem to benefit, at least in the short-run, from the announcement of M&As especially when M&A deals are paid by cash. In contrast, bidding banks seem to reap marginal gains surrounding M&A dates. These results could be useful to bank managers who intend to get a toehold in a market that is relatively new and presents some market characteristics such as high ownership concentration, state intervention, market underdevelopment, high cost of capital, etc.

The remainder of the paper is as follows: Section 2 presents the pertinent literature review, while Section 3 describes data and methodology. Section 4 presents the empirical results of the study, while Section 5 summarizes the most important results.

## 2. LITERATURE

The pertinent literature has identified several factors which constrain acquisitions in the banking sector (Beltratti and Paladino, 2013). These include: (i) Economies of scale associated with centralizing functions like IT and cash management, (ii) economies of information associated with better screening of borrowers (Panetta et al., 2009), (iii) market power (Focarelli et al., 2002; Hankir et al., 2011), (iv) geographic, portfolio and activity diversification bringing benefits in terms of risk reduction (Hughes et al., 1999; Emmons et al., 2004; Van Lelyveld and Knot, 2009), (v) implicit subsidies connected with a too-big-to-fail status (Demirgüç-Kunt and Huizinga, 2010), (vi) empire-building on the part of the managers. However, some of these factors have never been tested in Eastern Europe's bank M&As.

There is a bulk of studies in banking and finance literature regarding M&As that analyze the impact of M&A's on shareholders wealth and company's performance, motives for M&A's or variables that influence the success of M&As as well as the impact of M&A's on society and economy (DePamphilis, 2010). However, the M&A success is relevant and can be viewed from different perspectives. With the regard to the fact that M&As influence a wide spectrum of stakeholders (i.e., shareholders, managers, employees, clients, suppliers, lenders, etc.) and that interests of those stakeholders diverge, M&A transactions can, at the same time, positively influence one part, and negatively influence the other part of stakeholders.

Looking at the announcement effects of bank M&As, there is an overwhelming literature employing data from US banks. The

prevailing view is that while the target shareholders generally fare pretty well, most acquisitions fail to create value for acquirers (Hazelkorn et al., 2004). In specific, most of the studies report slightly negative value effects for bidders (e.g. Wall and Gup, 1989; Hawawini and Swary, 1990; Houston and Ryngaert, 1994; Madura and Wiant, 1994; Hudgins and Seifert, 1996; Pilloff, 1996; Kane, 2000; DeLong, 2001; Amihud et al., 2002; Cornett et al., 2003; Knapp et al., 2005), while some other studies report positive, though non-significant, abnormal returns (For example Kiyamaz, 2004, DeLong and DeYoung, 2007; Williams and Liao, 2008; Goddard et al., 2012). The combined effect in most studies is slightly positive but not significantly different from zero. Specifically, the combined excess returns of acquirers and targets are insignificant in Houston and Ryngaert (1994), Hudgins and Seifert (1996) and Pilloff (1996).

Despite the high level of M&A activity in the European banking sector, relatively little research has been conducted so far. The first three studies are those of Tourani-Rad and Van Beek (1999), Cybo-Ottone and Murgia (2000) and Beitel et al. (2004) which probe into the announcement effects of European bank M&As. In particular, Tourani-Rad and Van Beek (1999) analyze a sample of 58 different bidding banks in acquisitions between 1989 and 1996 in Europe and find non-significant difference in cross-border activity compared to domestic transactions. The shareholders of the acquiring bank do not experience a significant abnormal return. Cybo-Ottone and Murgia (2000) make use of 54 European M&A deals between 1988 and 1997 and find insignificant results regarding the returns for the acquiring bank's shareholders. Beitel et al. (2004) analyze 98 European M&A transactions that occurred between 1987 and 2000. Employing regression analyses, they test different potential value drivers regarding their influence on the cumulative average abnormal return (CAAR). Their results indicate that cross border M&A deals increase the CAAR of the target bank, while bidders enjoy price appreciations in domestic transactions. For the combined entity the geographic focus, however, is not an important value driver.

A new wave of European evidence points towards zero returns or marginal profits in the short-term for acquirer shareholders in the event of an M&A announcement for European samples of banking institutions. Campa and Herrando (2006) examine the financial industry in Europe during 1998-2002 and find that abnormal returns for bidders are zero, while target banks experiencing low operating performance are positively affected by the transaction in the long-run. Hagendorff et al. (2008) show positive short-term abnormal returns for bidder banks, while Lensink and Maslennikova (2008) find evidence of marginal or zero profits for bidders.

Clearly positive value creation is reported in Cybo-Ottone and Murgia (2000), where after analyzing 54 large European bank mergers during the period 1989-1997. Evidence of value creation from cross-border M&As is also found in Schmutzter (2006). Beitel et al. (2004) find a significant positive effect for combined entities and Ekkayokkaya et al. (2009) show positive abnormal returns resulting from mergers especially for the period before the introduction of the common currency in Europe.

More recently, Tsangarakis et al. (2013) examine the European financial sector during the period 2000-2006 and assert that targets gain more through small cross-border deals. They also conclude that prior targets' performance impacts negatively on abnormal returns derived from the transaction announcement. Beltratti and Paladino (2013) examine a sample of acquirers during 2007-2010 and find that bidders' returns are positively affected by bank profitability and efficiency. Finally, Kyriazopoulos and Drymbetas (2014) explore the short-term stock price reaction of cross-border bank M&As in Western Europe for the period 1998-2009. Consistent with prior literature, they demonstrate that targets significantly benefit from M&As, while bidders undergo price losses during the M&A announcement dates.

Overall the existing literature on EU bank M&A activity is in line with the U.S. evidence with respect to target banks' performance. The vast majority of the pertinent literature reports that targets experience positive abnormal returns to the M&A announcements. Nonetheless, there exist noteworthy differences with respect to acquirers. The European evidence for bidders is mixed; there is a significant body of research which shows marginal profits to be earned by bidder banks. This represents a remarkable deviation from the commonly held view that bidders are usually losers in the short-run. Note that similar finding of marginal or zero profits for bidders is scarcely found in the U.S. financial sector. Europe, therefore, seems to provide a more favorable ground for bidder bank shareholders. However, the current study attempts to investigate whether this favorable environment for bidding banks holds in Eastern Europe, a market that has recently opened and deregulated.

### 3. RESEARCH DESIGN

#### 3.1. Sample

Data regarding deal type, announcement dates, method of payment, deal status, country of origin, percentage acquired, announced total value of each deal, stock prices and market indices were culled from Bloomberg.

The focus of the current study is the wealth effects of bank M&As that occurred between 1995 and 2015 in Eastern Europe. To form our sample of M&A transactions we set the following criteria:

- The announcement date of the merger or acquisition was set between January 01, 1995 and December 31, 2015
- Both acquirers and targets should be banks having the same two-digit SIC code
- M&As had been completed and not pending or withdrawn
- The acquiring and the acquired bank were located in Eastern Europe
- Both acquirers and targets were listed banks
- Multiple M&As within the same calendar year from the same bidder were excluded from the sample. The reason behind this decision is that the conveyed information content of the first M&A announcement is mitigated in the subsequent M&A announcements.

The above criteria rendered a final sample of 69 bank M&A transactions of which 8 are cross-border and 61 domestic ones. Table 1 presents the sample distribution by year. As it can be seen,

the sample distribution is scattered across all years with the number of M&As peaked in 1999 (11 deals). It is worth mentioning that the number of deals continued in the crisis period (2008 onwards) proving that the financial turmoil did not affect severely bank M&As in Eastern Europe.

Table 2 presents the sample distribution of M&As by the country of origin of both targets and acquirers. Russia and Poland are the two countries that host most of the M&A deals. In specific,

**Table 1: Distribution of M&As by year**

Year	N (%)
1995	3 (4)
1996	2 (3)
1997	4 (6)
1998	3 (4)
1999	11 (16)
2000	3 (4)
2001	3 (4)
2002	0 (0)
2003	0 (0)
2004	0 (0)
2005	3 (4)
2006	1 (1)
2007	5 (7)
2008	5 (7)
2009	2 (3)
2010	9 (13)
2011	1 (1)
2012	5 (7)
2013	2 (3)
2014	2 (3)
2015	5 (7)
Total	69 (100)

M&As: Mergers and acquisitions

**Table 2: Distribution of M&As by country**

Target	N (%)	Acquirer	N (%)
Bosnia	1 (1)	Bosnia	0 (0)
Bulgaria	1 (1)	Bulgaria	2 (3)
Croatia	3 (4)	Croatia	4 (6)
Czech Republic	2 (3)	Czech Republic	2 (3)
Estonia	3 (4)	Estonia	5 (7)
Former Yugoslav Republic of Macedonia	1 (1)	Former Yugoslav Republic of Macedonia	0 (0)
Hungary	1 (1)	Hungary	1 (1)
Latvia	3 (4)	Latvia	0 (0)
Lithuania	4 (6)	Lithuania	5 (7)
Poland	15 (22)	Poland	16 (23)
Russian Federation	21 (30)	Russian Federation	23 (33)
Slovenia	3 (4)	Slovenia	3 (4)
Turkey	3 (4)	Turkey	2 (3)
Ukraine	8 (12)	Ukraine	6 (9)
Total	69 (100)	Total	69 (100)
Cross-border	8 (12)		
Domestic	61 (88)		

M&As: Mergers and acquisitions

21 targets and 23 acquirers are Russian banks, while 15 targets and 16 bidders are Polish banks. Ukrainian banks hold the third position in the number of targets and bidders.

Table 3 reports some descriptive statistics for the examined M&A transactions. The mean percentage acquired is 38.64%, while that owned after the M&A deal is 62.79%. These two figures demonstrate that the deals under examination lead to the acquisition of major stake holdings (>50% of voting rights after the transaction) in target banks. Finally, the mean enterprise value at the M&A announcement is 2454.96 million dollars, while that of equity value is 1038.60 million dollars.

### 3.2. Event Study Methodology

To calculate abnormal returns around M&As, daily closing prices 250 days before and 10 days after the announcement date of the M&A deals were collected both for banks' equities and for their corresponding stock market indices. To estimate the market reaction to M&A announcements, we employ the standard event methodology and calculate AARs and CAARs for the 21-day period (-10, +10) surrounding the merger or acquisition date.

To compute both AARs and CAARs we use the market model. Based on the market model, the abnormal return achieved by firm  $i$  at time  $t$  is estimated as follows:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (1)$$

Where,  $R_{it}$  is the observed return of bank  $i$  at time  $t$ ;  $R_{mt}$  is the observed return on the benchmark at time  $t$  and  $\varepsilon_{it}$  is the residual. We estimate parameters  $\alpha_i$  and  $\beta_i$ , using ordinary least squares. Based on these estimated parameters for the period  $t = -250$  to  $-11$ , we use the market model to calculate abnormal returns  $AR_{it}$  at time  $t$ , for each bank  $i$  as follows:

$$AR_{it} = R_{it} - [\hat{\alpha}_i + \hat{\beta}_i R_{mt}] \quad (2)$$

The event window is  $T = (10, +10)$  days, where  $t = 0$  is the announcement day of a transaction. Within the event windows several periods such as  $(-1, +1)$ ,  $(-10, +1)$ , etc. are studied. Calculated abnormal returns then are averaged as follows:

$$AAR_t = \frac{1}{N} \sum_{i=1}^n AR_{it} \quad (3)$$

Where,  $N$  = Number of analyzed stocks, and  $t$  = Point of time to analyze,  $t \in T$ .

CAARs for any interval  $[t_1; t_2]$  during the event window  $T$  are calculated as follows:

$$CAAR_{[t_1; t_2]} = \sum_{[t_1; t_2]} AAR_t \quad (4)$$

CAARs are computed for every bank over several event windows to capture the market reaction before as well as after the announcement of the deal. More specifically, we set out our calculations for event windows of 2-days, ( $t = -1$  to  $t = 0$ ), 3-days ( $t = -1$  to  $t = +1$ ), 5-days ( $t = -5$  to  $t = -1$  as well as  $t = +1$  to  $t = +5$ ), 11-days ( $t = -5$  to  $t = +5$  as well as  $t = -10$  to  $t = -1$  and  $t = +1$  to  $t = +10$ ) and 21-days ( $t = -10$  to  $t = +10$ ). The reason for estimating CAARs for various event windows is to detect possible sluggish market reaction or information leakages around the M&A announcement date. To test for significance of AARs and CAARs  $t$ -statistics are employed as suggested by Dodd and Warner (1983), which were also applied by DeLong (2001), Hudgins and Seifert (1996) and Fritsch et al. (2007). The test statistic furthermore is adjusted to reflect cross-sectional independence (Brown and Warner, 1985; Dodd and Warner, 1983).

### 3.3. Regression Model

To identify the determinants of abnormal behavior surrounding M&A deals, we perform a regression analysis using AARs or CAARs as dependent variable against a set of control variables. Controlling for year and country effects, our model takes the following form:

$$AAR_t = b_0 + b_1 * COMP_t + b_2 * CASH_t + b_3 * SIZE_t + b_4 * RS_t + b_5 * DOM_t + b_6 * ROE_t + e_t \quad (5)$$

Where,  $COMP_t$  measures banking competition based on the percentage of listed banks within a country in a specific year,  $CASH_t$  is a dummy variable taking a value of 1 if the acquisition was paid by cash and 0 otherwise,  $SIZE_t$  is the bank size as measured by the natural logarithm of bank's equity market value 1 month prior to the M&A announcement date,  $RS_t$  is the relative size of the target in relation to the bidder 1 month prior the M&A announcement date,  $DOM_t$  is a dummy variable taking a value of 1 for domestic M&As and 0 otherwise,  $ROE_t$ , which measures profitability of target bank, is the return on equity of the target bank 1 month prior the M&A announcement date.

## 4. EMPIRICAL RESULTS

### 4.1. Event Study Results

Table 4 reports the market reaction of acquirers to M&A deals. In line with prior studies exploring bank M&As, we find positive, however, non-significant AARs for the bidding banks on days  $-1$ ,  $0$  and  $+1$ . Moreover, the CAAR of 3 days  $(-1, +1)$  is 1.35% statistically non-significant at any conventional level. Looking at

**Table 3: Descriptive statistics of M&A deals**

Variables	Mean	Median	Standard deviation	Max	Min
Percentage of shares acquired	38.64	20.00	36.31	100.00	2.40
Percentage owned after transaction	62.79	73.48	36.83	100.00	2.40
Enterprise value at announcement (\$mil)	2454.96	289.38	3926.60	17,687.91	3.88
Equity value at announcement (\$mil)	1038.60	214.48	1676.42	7569.22	3.88

M&As: Mergers and acquisitions

**Table 4: AARs and CAARs for bidding banks in Eastern Europe**

Panel A: AARs for bidders (N=69)		
Days	AAR%	t-student
-10	0.000	0.00
-9	-0.547	-0.51
-8	-0.623	-0.86
-7	-0.238	-0.23
-6	-0.213	-0.01
-5	-0.065	-0.12
-4	-0.228	-0.16
-3	0.289	0.20
-2	-0.284	-0.06
-1	0.614	0.08
0	0.623	0.97
1	0.113	0.12
2	0.124	0.24
3	0.088	0.09
4	0.236	0.31
5	-0.217	-0.44
6	0.043	0.04
7	0.485	0.40
8	-0.728	-0.25
9	0.276	0.36
10	-0.047	-0.05
Panel B: CAARs for bidders		
Event period	CAAR %	t-student
CAAR (-10, +10)	-0.299	-0.48
CAAR (-10, -1)	-1.295	-1.32
CAAR (+1, +10)	0.373	0.69
CAAR (-5, +5)	1.293	0.33
CAAR (-5, -1)	-0.866	-0.68
CAAR (+1, +5)	0.344	0.77
CAAR (-1, +1)	1.350	1.47
CAAR (-1, 0)	1.237	1.53

\*, \*\*, \*\*\* denote statistical significance at the 10%, 5% and 1% level, respectively.  
CAAR: Cumulative average abnormal return, AAR: Average abnormal return

**Table 5: AARs and CAARs for target banks in Eastern Europe**

Panel A: AARs for targets (N=69)		
Days	AAR%	t-student
-10	0.663	0.95
-9	0.106	0.16
-8	0.607	0.25
-7	0.979	0.65
-6	0.655	0.37
-5	0.589	0.56
-4	0.692	0.37
-3	1.662	1.23
-2	3.593	1.91*
-1	4.284	2.64**
0	5.237	3.84***
1	3.113	1.98**
2	0.224	0.38
3	0.185	0.29
4	0.036	0.11
5	-0.317	-0.44
6	-0.043	-0.04
7	0.085	0.05
8	-0.228	-0.25
9	0.176	0.26
10	-0.277	-0.35
Panel B: CAARs for targets		
Event period	CAAR %	t-student
CAAR (-10, +10)	22.021	2.48**
CAAR (-10, -1)	13.83	2.32**
CAAR (+1, +10)	2.954	0.69
CAAR (-5, +5)	19.298	2.33**
CAAR (-5, -1)	-0.866	-0.68
CAAR (+1, +5)	3.241	0.77
CAAR (-1, +1)	12.634	3.47***
CAAR (-1, 0)	9.521	2.63***

\*, \*\*, \*\*\* denote statistical significance at the 10%, 5% and 1% level, respectively.  
CAAR: Cumulative average abnormal return, AAR: Average abnormal return

the various event windows prior and post-M&A date, we do not detect any statistically significant stock price reaction suggesting that the market does not assess the announced M&A deals as value-added corporate events for bidding banks. This result is in line with Tsangarakis et al. (2013) who also derive marginally positive and non-significant returns during the same event windows. With the exception of the (-1, 0) event window, CAARs are marginally negative (positive) in the examined periods preceding (following) the announcement, but the absence of statistical significance does not allow us to make inferences of information leakage or retard market reaction. Instead, we can assert that the market reacts in an efficient manner lending support for the efficient market hypothesis.

Panel A of Table 5 displays the results for targets. Similar to prior studies, we observe significant wealth effects for target shareholders. In specific, the AAR on day 0 is 5.237%, statistically significant at the 1% level. However, the upward trend of stock prices commences 2 days before the actual announcement date and holds up to day +1. On day -2, the AAR is 3.593%, on day -1 is 4.284% and on day +1 is 3.113%, all statistically significant. Collectively, over the 3-day and 2-day event windows CAARs amount to 12.634% and 9.521%, respectively (Panel B). The positive abnormal behavior persists in all pre-event windows such as (-10, -1) and (-5, -1). Beltratti and Paladino (2013) claim that

event windows prior to the announcement of the deal serve solely the purpose of determining the forces of information dissemination prior to the event, and we verify that the pre-announced excess returns divulge the positive information content conveyed by the upcoming M&As for target banks.

Another task of the current study is the examination of the wealth effects surrounding M&A announcements taking into account the method of payment. In specific, we explore the market response to M&A deals paid by cash or through stock swap. For this purpose, we split the full sample of target banks<sup>1</sup> based on the method of payment. Table 6 presents the results from cash M&As. Compared to the full sample of targets, the stock price response is stronger on magnitude and persistence. In particular, the stock price appreciation commences on day -3 and persists to day +1. Moreover, the excess returns are higher in all these days *viz.* to the full sample of targets. For instance, on day 0 the AAR is 8.379% as compared to 5.237% of the full sample of targets. Turning to CAARs, the stronger market reaction is more than evident in all event windows. Specifically, the 3-day CAAR is 20.214% and that of 2-days is 15.234%, both statistically significant at the 1% level.

1 The sample of bidders is not split since the market reaction to M&A announcements is statistically non-significant.

**Table 6: AARs and CAARs for target banks get acquired by cash**

Panel A: AARs for targets (N=48)		
Days	AAR%	t-student
-10	1.061	1.52
-9	0.169	0.26
-8	0.971	0.40
-7	1.566	1.04
-6	1.048	0.59
-5	0.942	0.90
-4	1.107	0.59
-3	2.659	1.97**
-2	5.749	3.06***
-1	6.854	4.22***
0	8.379	6.14***
1	4.981	3.17***
2	0.358	0.61
3	0.296	0.46
4	0.058	0.18
5	-0.507	-0.70
6	-0.069	-0.06
7	0.136	0.08
8	-0.365	-0.40
9	0.282	0.42
10	-0.443	-0.56
Panel B: CAARs for targets		
Event period	CAAR %	t-student
CAAR (-10, +10)	35.234	5.48**
CAAR (-10, -1)	22.128	-2.62**
CAAR (+1, +10)	4.726	0.99
CAAR (-5, +5)	30.877	4.33**
CAAR (-5, -1)	-0.866	-0.88
CAAR (+1, +5)	5.186	1.57
CAAR (-1, +1)	20.214	4.56***
CAAR (-1, 0)	15.234	3.38***

\*, \*\*, \*\*\* denote statistical significance at the 10%, 5% and 1% level, respectively.  
CAAR: Cumulative average abnormal return, AAR: Average abnormal return

**Table 7: AARs and CAARs for target banks get acquired through stock swap**

Panel A: AARs for targets (N=21)		
Days	AAR%	t-student
-10	0.259	0.59
-9	0.041	0.10
-8	0.237	0.16
-7	0.382	0.41
-6	0.256	0.23
-5	0.230	0.35
-4	0.270	0.23
-3	0.649	0.77
-2	1.404	1.19
-1	1.673	1.65
0	2.046	2.40**
1	1.216	1.24
2	0.088	0.24
3	0.072	0.18
4	0.014	0.07
5	-0.124	-0.28
6	-0.017	-0.03
7	0.033	0.03
8	-0.089	-0.16
9	0.069	0.16
10	-0.108	-0.22
Panel B: CAARs for targets		
Event period	CAAR %	t-student
CAAR (-10, +10)	8.602	2.28**
CAAR (-10, -1)	5.402	-1.62
CAAR (+1, +10)	1.154	0.49
CAAR (-5, +5)	7.538	4.33**
CAAR (-5, -1)	-0.866	-0.59
CAAR (+1, +5)	1.266	0.57
CAAR (-1, +1)	4.935	2.17**
CAAR (-1, 0)	3.719	1.62

\*, \*\*, \*\*\* denote statistical significance at the 10%, 5% and 1% level, respectively.  
CAAR: Cumulative average abnormal return, AAR: Average abnormal return

These results suggest that the market applauds bank M&As that are paid through cash in countries that have underdeveloped banking sector and stock markets with more asymmetric information. In such environments, shareholders of the target banks are more willing to accept cash payments even if these deals lead to the loss of corporate control and management.

Table 7 reports the results from the wealth effects emanating from the stock payment or mixed payment (both are considered as stock swap). In contrast with the market reaction to M&As paid by cash, M&As paid with stock swap produce much less stock price response on day 0 and around it. In particular, the 3-day CAAR is 4.935%, statistically significant at the 5% level. However, the 2-day CAAR is 3.719%, statistically non-significant. These results reveal a market reaction that is almost four times less than that of the sample of cash payments. Untabulated two-tailed statistics verify the statistical differences between the two sub-samples of targets for the two aforementioned event periods. Collectively, the above results confirm prior evidence which shows that M&As paid for with stock are negatively valued by target shareholders because they prefer to avoid the risk of wealth expropriation as a result of becoming minority shareholders after the deal.

Overall, the current study supports prior evidence that bank M&As bring about non-significant abnormal returns for bidding banks

and significantly positive abnormal returns for targets around the deal announcement. As the market for corporate control of public companies is excessively competitive, acquirers tend to bid more aggressively and offer hefty premiums to targets, which, as a result, capture most of the acquisition benefit and enjoy significant price appreciation. At the same time, the acquisitions may fail because of decrease in productivity, drop in employee satisfaction and increase in management attrition rates. Finally, our results suggest that the method of payment really affects the market reaction of target banks, favoring those deals that involve cash disbursement.

## 4.2. Regression Results

We attempt to investigate the factors that explain market reaction for targets, which display positive and significant abnormal returns around M&A event dates. In specific, we regress abnormal returns of target banks against a gamut of control variables such as bank competition in a target country, the method of payment (cash vs. stock), the type of the M&A (domestic vs. cross-border), the target bank size and the relative size of the target in relation to the bidder. In all regressions we control for year and country effects.

In Model 1 of Table 8 the dependent variable is the AAR of day 0. The results show that market competitiveness (*COMP*) is positive and statistically significant at the 1% level, demonstrating that target banks earn higher abnormal returns as the market

**Table 8: Regression results**

Variable	Model 1	Model 2
Intercept	0.439 (0.38)	0.764 (0.47)
<i>COMP</i>	0.089* (1.85)	0.109** (2.52)
<i>CASH</i>	0.266*** (2.75)	0.276*** (2.99)
<i>SIZE</i>	-0.045 (-0.35)	-0.068 (-0.76)
<i>RS</i>	0.030* (1.69)	0.034* (1.70)
<i>DOM</i>	0.163 (0.52)	0.232 (0.92)
<i>ROE</i>	0.015 (0.76)	0.020 (0.85)
Year effects	Yes	Yes
Country effects	Yes	Yes
Number of observations	69	69
F-statistic	5.78***	4.78***
R <sup>2</sup> (%)	37.82	35.39

In Model 1, the dependent variable is AAR of day 0 and in model is the 3-day CAAR (-1, +1).  $COMP_i$  measures banking competition based on the percentage of listed banks within a target country in a specific year,  $CASH_i$  is a dummy variable taking a value of 1 if the acquisition was paid by cash and 0 otherwise,  $SIZE_i$  is the bank size as measured by the natural logarithm of bank's equity market value 1 month prior to the M&A announcement date,  $RS_i$  is the relative size of the target in relation to the bidder 1 month prior the M&A announcement date,  $DOM_i$  is a dummy variable taking a value of 1 for domestic M&As and 0 otherwise,  $ROE$  is the return on equity of the target bank 1 month prior the M&A announcement date. T-statistics are in parentheses. \*, \*\*, \*\*\* denote statistical significance at the 10%, 5% and 1% level, respectively. CAAR: Cumulative average abnormal return, AAR: Average abnormal return, M&As: Mergers and acquisitions

competition is more intense. This result is in line with the notion that if competition for listed targets is a key determinant of gains to acquisitions, then abnormal returns to target firms should systematically increase with the time-varying competition measure. Moreover, the coefficient of the method of payment (*CASH*) is statistically significant corroborating our earlier evidence that the market reaction is stronger when M&A deals are financed by cash. Finally, relative size demonstrates a positive and statistically significant coefficient suggesting that the higher the target size in comparison to bidder's, the stronger the market reaction to M&A deals. Qualitatively similar results are obtained when we regress CAARs of 3-days (-1, +1) against the same set of control variables. Again, the level of competition, the method of payment and the relative size are the variables that exert statistical influence on CAARs of target banks.

## 5. CONCLUSIONS

Banks decide to be involved in an M&A deal intending to create synergies which are expected to decrease operating expenses, rationalize operations, receive tax benefits or increase market share and profit margins. However, the key question is how these synergies are distributed between shareholders of target and bidding banks. Many papers have attempted to answer the above question, but there is mixed evidence regarding who benefits and loses from an M&A transaction. The current study is another academic endeavor to answer the question whether shareholders

of bidders and target benefit from a bank M&A transaction. In specific, this paper empirically addresses the factors that influence announcement effects of bank M&As in Eastern Europe employing a dataset of 69 transactions between 1995 and 2015. The main contribution of our study is the examination of an updated dataset of M&As from a market that has been largely ignored by researchers. Moreover, the results from the method of payment of M&As allow us to make the appropriate inferences regarding the factors that drive market reaction surrounding M&A deals.

The results from the event study shows that, on average, bidding banks do not exhibit statistically significant abnormal returns on the actual announcement date and the days around it. This result is in line with the prevalent view that bidders earn marginal or trivial abnormal returns in Europe. On the other hand, the apparent winner of the M&A deal is target banks which greatly benefit from the announcement of a merger or acquisition. In specific, one investor, purchasing bank stocks 10 days before the announcement of the M&A deal and selling them 10 days after, can earn an excess return that exceeds 22%. Moreover, this excess return amounts to 35% when the deal is going to be financed by cash rather than with stock or combination of cash and stock.

Similar to Fritsch et al. (2007), standard factors explaining M&A success in developed markets, such as profitability, type of acquisition and size of the target are not the main explanatory variables in bank M&A in Eastern Europe. Instead, the value drivers of target stocks seem to be the level of competition, the method of payment or the relative size of target *viz.*, to bidders.

Our empirical results have several managerial implications for financial institutions planning to expand in Eastern Europe. Summarizing our results, we see that M&A announcements produce economically significant benefits for target shareholders who have invested their money in a bank domiciled in Eastern Europe. Second, we find that target banks gains are positively associated with the level of competition within their markets. Third, we assert that M&As financed purely with cash are associated with higher excess returns for targets making the method of payment significant instrument of value enhancement.

This work is a solid step towards analyzing the impact of bank M&As in Eastern Europe. However, taking into account the dynamic features of the region and the banking sector alike, future research could be directed to analyze deal-specific factors such as takeover premium, change of management, subsequent M&As and equity injections or business strategy divergence. Moreover, the post-M&A performance (either stock or financial) of merged or acquired banks could be another interesting aspect of M&As that merits investigation.

## REFERENCES

- Amihud, Y., DeLong, G.L., Saunders, A. (2002), The effects of cross-border bank mergers on bank risk and value. *Journal of International Money and Finance*, 21, 857-877.
- Beitel, P., Schiereck, D., Wahrenburg, M. (2004), Explaining the M&A

- success in European bank mergers and acquisitions. *European Financial Management*, 10, 109-134.
- Beltratti, A., Paladino, G. (2013), Is M&A different during a crisis? Evidence from the European banking sector. *Journal of Banking and Finance*, 37(12), 5394-5405.
- Brown, S., Warner, J. (1985), Using daily stock returns: The case of event studies. *Journal of Financial Economics*, 14, 3-31.
- Campa, J.M., Herrando, I. (2006), M&As performance in the European financial industry. *Journal of Banking and Finance*, 30(12), 3367-3392.
- Cornett, M.M., Hovakimian, G., Palia, D., Tehranian, H. (2003), The impact of manager-shareholder conflict on acquiring bank returns. *Journal of Banking and Finance*, 27(1), 103-131.
- Cybo-Ottone, A., Murgia, M. (2000), Mergers and shareholder wealth in European banking. *Journal of Banking and Finance*, 24, 831-859.
- DeLong, G. (2001), Stockholder gains from focusing versus diversifying bank mergers. *Journal of Financial Economics*, 59, 221-252.
- DeLong, G., DeYoung, R. (2007), Learning by observing: Information spillovers in the execution and valuation of commercial bank M&As. *Journal of Finance*, 62, 181-216.
- Demirgüç-Kunt, A., Huizinga, H., (2010), Are banks too big to fail or too big to save? International evidence from equity prices and CDS spreads. Policy Research Working Paper, 5360. The World Bank.
- DePamphilis, D., (2010). *Mergers, Acquisitions, and other Restructuring Activities: An Integrated Approach to Process, Tools, Cases, and Solutions*. 6<sup>th</sup> ed. London, UK: Academic Press.
- Dodd, P., Warner, J. (1983), On corporate governance: A study of proxy contests. *Journal of Financial Economics*, 11(1-4), 401-438.
- Ekkayokkaya, M., Holmes, P., Paudyal, K. (2009), The Euro and the changing face of European banking: Evidence from mergers and acquisitions, *European Financial Management*, 15, 451-476.
- Emmons, W., Gilbert, A., Yeager, T. (2004), Reducing the risk at small community banks: Is it size or geographic diversification that matters? *Journal of Financial Services Research*, 25, 259-281.
- Focarelli, D., Panetta, F., Salleo, C. (2002), Why do banks merge? *Journal of Money Credit and Banking*, 34, 1047-1066.
- Fritsch, M., Gleisner, F., Holzhäuser, M. (2007), Bank M&A in Central and Eastern Europe. EFMA; 2007.
- Available from: <http://www.efmaefm.org/0EFMAMEETINGS/EFMA%20ANNUAL%20MEETINGS/2007-Austria/papers/0457.pdf>.
- Goddard, J., Molyneux, P., Zhou, T. (2012), Bank mergers and acquisitions in emerging markets: Evidence from Asia and Latin America. *European Journal of Finance*, 18, 419-438.
- Hagendorff, J., Collins, M., Keasey, K. (2008), Investor protection and the value effects of bank merger announcements in Europe and the US. *Journal of Banking and Finance*, 32, 1333-1348.
- Hankir, Y., Rauch, C., Umber, M.P. (2011), Bank M&A: A market power story? *Journal of Banking and Finance*, 35, 2341-2354.
- Hawawini, G.A., Swary, I. (1990), *Mergers and Acquisitions in the U.S. Banking Industry: Evidence from the Capital Markets*. New York: Elsevier Science Publishers.
- Hazelkorn, T., Zenner, M., Shivdasani, A. (2004), Creating value with mergers and acquisitions. *Journal of Applied Corporate Finance*, 16(2-3), 80-91.
- Houston, J.F., Ryngaert, M.D. (1994), The overall gains from large bank mergers. *Journal of Banking and Finance*, 18(6), 1155-1176.
- Hudgins, S.C., Seifert, B. (1996), Stockholders and international acquisitions of financial firms: An emphasis on banking. *Journal of Financial Services Research*, 10, 163-180.
- Hughes, J.P., Lang, W.W., Mester, L.J. (1999), The dollars and sense of bank consolidation. *Journal of Banking and Finance*, 23, 291-324.
- Kane, E.J. (2000), Incentives for banking megamergers: What motives might central-bank economists infer from event-study evidence? *Journal of Money, Credit and Banking*, 32(3), 671-699.
- Kiyamaz, H. (2004), Cross-border acquisitions of US financial institutions: Impact of macroeconomic factors. *Journal of Banking and Finance*, 28, 1413-1439.
- Knapp, M., Gart, A., Becher, D. (2005), Post-merger performance of bank-holding companies 1987-1998. *Financial Review*, 40, 549-574.
- Kyriazopoulos, G., Drymbetas, E. (2014), Short-term stock price behaviour around European cross-border bank M&As. *Journal of Applied Finance and Banking*, 4(3), 47-70.
- Lensink, R., Maslennikova, I. (2008), Value performance of European bank acquisitions. *Applied Financial Economics*, 18, 185-198.
- Madura, J., Wiant, K.J. (1994), Long-term valuation effects of bank acquisitions. *Journal of Banking and Finance*, 18(6), 1135-1154.
- Panetta, F., Schivardi, F., Shum, M. (2009), Do mergers improve information? Evidence from the loan market. *Journal of Money Credit and Banking*, 41, 673-709.
- Piloff, S.J. (1996), Performance changes and shareholder wealth creation associated with mergers of publicly traded banking institutions. *Journal of Money, Credit, and Banking*, 28, 249-310.
- Schmautzer, D. (2006), *Cross-Border Bank Mergers: Who Gains and Why?* Columbia: Working Paper, University of Muenster.
- Tourani-Rad, A., Van Beek, L. (1999), Market valuation of European bank mergers. *European Management Journal*, 17, 532-540.
- Tsangarakis, N.V., Tsigotakis, H.K., Tsigotakis E.D. (2013), Shareholders wealth effects and intra-industry signals from European financial institution consolidation announcements. *Applied Financial Economics*, 23, 1765-1782.
- Wall, L.D., Gup, B.E. (1989), *Market valuation effects of bank acquisitions. Bank Mergers, Current Issues and Perspectives*. Boston: Kluwer Academic Publishers.
- Williams, J., Liao, A. (2008), The search for value: Cross-border bank M&A in emerging markets. *Comparative Economic Studies*, 50, 274-296.
- Van Lelyveld, I., Knot, K. (2009), Do financial conglomerates create or destroy value? Evidence for the EU. *Journal of Banking and Finance*, 33, 2312-2321.