SHORT AND LONG-TERM PERFORMANCE ANALYSIS OF BANKS MS&AS IN EUROPE

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Abstract

Based on a sample of 152 European banks Ms&As deals during the period 1996-2010, we probe into the short-term reaction of stock prices around the Ms&As announcement day by calculating abnormal returns for acquirers and targets. We also analyze the long-term value creation of combined entities by calculating buy-and-hold returns over two years subsequent to Ms&As. We find stock price erosions in the post-event 10-day period for the overall sample of acquirers. This finding is particularly evident in the case of low profitability bidder firms. We also detect a significantly positive stock price reaction of target bank shares for the 3-day event window around the Ms&As announcement day. This major finding remains unquestionable, throughout domestic and cross-border deals and irrespective of prior profitability of target banks.

Keywords: Banks, BHARs, Cross-border M&As, Domestic Ms&As, Bidders, Targets

JEL: G11; G14, G15; G34

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1 Introduction

This paper studies the stock market valuation of mergers and acquisitions (M&As) in the European banking sector during the period 1996-2010. The European financial industry has undergone a significant consolidation process that has significantly reduced the number of banking institutions today. Surviving institutions are larger, more diversified and operating in more places than ever before (DeYoung et al., 2009). These profound changes were triggered, in the mid-90s, by the, at that time, looming ahead common currency adoption (Ekkayokkaya et al., 2009), the removal of cross-border barriers (Bley and Madura 2003), the consolidation process on a national banking level (Cybo-Ottone and Murgia 2000), as well as other factors like deregulation of the banking system, technological progress and increasing competition (Campa and Hernando 2006).

In spite of the banking merger spree that coincides with the 6th merger wave originating from the U.S. market, the number of domestic deals continuous to outnumber cross-border M&As (Lozano-Vivas et al., 2011). The bulk of transactions involves domestic market consolidations that in some cases aim at placing barriers to foreign market intruders. However, commercial banks and other financial services firms that wish to expand internationally, after cross-border barriers were lifted, do that almost always via M&As (DeYoung et al., 2009). The European Commission (2005) pinpoints that most international M&A activity in Europe is carried out between EU and non-EU counterparts.

The key efficiency gains targeted through the realization of bank M&A transactions have remained at the epicenter of academic scrutiny in recent years.[6] Profitability enhancement (Copeland et al., 2003), growth and operational performance (Altunbas and Marques, 2008), cost reduction, elimination of overlapping operations and centralization of backroom

[6] Cybo-Ottone and Murgia (2000) claim that even though academic studies have consistently shown, especially in the 80's and 90's, no significant gain in value or performance through M&As, they continue to dominate the corporate events market, aiming at more or less the same goals over the years.

operations (Houston et al., 2001) are some of the efficiency attributes analyzed by the literature. More recently, Hankir et al., (2011) claim that bank M&As are all about market power and the exploitation of post-merger synergies by the combined entity. While the above apply to both domestic and cross-border M&As, the latter aim at further benefits that pertain to cross-border transactions alone. International expansion (Frohlich and Kavan 2000), and risk diversification (Altunbas and Marques 2008) are the most cited reasons. In a case seemingly directly related to the recent financial crisis of 2008 and the debt crisis in the Southern Eurozone area, Demirguc-Kunt and Huizinga (2010) acknowledge implicit subsidies in order to prevent too big to fail bank failures as a further factor explaining bank M&As. However, in line with the hubris hypothesis, the manager-utility-maximization hypothesis and the agency problem, acquisitions are often driven by managers' motives irrespective of true value or the interests of shareholders (Rad and Van Beek 1999).

Even though until the late 90's the knowledge on M&As came from US studies, thereafter a bulk of studies on European markets have enriched our understanding on the forces underpinning bank M&As (Beltratti and Paladino 2013; Tsangarakis et al., 2013; Beccalli and Frantz 2009 and 2013; Hagendorff et al., 2012; Lozano-Vivas et al., 2011; and Van Lelyveld and Knot 2009, to name a handful of them).[7] These studies entail, partly or exclusively, an effort to provide explanations as to what has been the outcome of this recent surge of bank M&As. A significant part of the US literature advocates, that M&A operations do not have a positive influence on performance (DeLong and De Young 2007; Amel et al., 2004). Findings are inconclusive, and until recently European evidence appeared to support the view that significant performance improvements are seldom achieved (Altunbas and Marques 2008; Vander Vennet 2002).

The literature that analyzes the results of bank M&As concludes that, on average, consolidations result in a positive short-term effect for the shareholders of the bank being acquired, while the results for the acquiring bank shareholders are mixed (Knapp et al., 2006). Furthermore, target bank shareholders realize high returns in both successful and unsuccessful bids. U.S. evidence largely supports the view that gains from takeovers are either negative or at best insignificant for bidders (DeLong and DeYoung 2007; Knapp et al., 2005). European evidence on acquirer gains vary from insights of negative short-term returns (Altunbas and Marques 2008) to marginally positive ones that are directly related to the prior profitability of bidder banks (Beltratti and Paladino 2013). Finally, the evidence on the impact of M&As on the long-term stock price behavior of bank M&As remains open to academic scrutiny.

In this context the goal of this paper is to provide an assessment of the short and long-term gains of M&As using a sample of bank consolidations, both domestic and cross-border, during a period of increased M&A activity and fundamental changes in the European region that markedly affected financial markets' integration process (Adjaoute and Danthine 2003). Domestic transactions appear to entail significantly different motives, mainly generating increase in market power, economies of scale and are often pushed forward by policymakers for market stability reasons (Campa and Hernando 2006), thus representing a profoundly different category relative to international Ms&As. The relatively inconclusive evidence from the literature on short-term performance is a further motive urging us to provide evidence that would enable us to contribute to the state of the debate regarding the short-term success of Ms&As. We conduct event study for different short-term time horizons around the announcement of the deal. Moreover, we place emphasis on the role of prior profitability of both acquirers and targets in the short-term stock price behavior at the event of an M&A announcement.

Markets do not appear to place the deserved emphasis on the forces that render a large part of the M&A activity unsuccessful (Knapp et al., 2006). The fact that markets have short memory and fail to identify the pattern of flawed Ms&As is a major challenge that academics and market participants face. While short-term value creation has been extensively explored by the academic literature the same does not apply for the long-term impact of Ms&As, which are relatively under-researched (Drymbetas and Kyriazopoulos 2014). For that reason, our analysis is extended in the post-M&A era by calculating buy-and-hold returns (BHARs) over two years following Ms&As.

The rest of this paper is organized as follows. Section 2 presents the relevant literature. Section 3 describes the research design of the study and provides summary statistics information. Section 4 presents the empirical findings, while Section 5 summarizes the main results of the study.

2 Literature review

The formation of the Economic and Monetary Union (EMU) and the introduction of the euro are two main factors that motivated our research and are expected to have significantly influenced the attributes of bank Ms&As during our examination period. Allen and Song (2005) claim that these major changes in the European banking system took the form of an increase in the degree of internationalization and geographic expansion of the banking institutions. The European Commission (2005) prioritizes integration of the banking sector in line with the target of the

[7] Van Lelyveld and Knot (2009) focus specifically on the valuation of bank-insurance conglomerates.

development of the single market for financial services. Cross-border M&As exploit market imperfections and seek for risk reduction through diversification, amongst other main motives illuminated by the body of academic research (Bruner 2004), while at the same time serving the European Commission aims. However, the expected surge of cross-border Ms&As in the 2000s was not as strong as the one experienced during the 5th wave of Ms&As in the late 90s (Gaughan 2011). Hence, domestic Ms&As internationally outnumber cross-border ones (Lozano-Vivas et al., 2011) at a steady pace of five to one (Campa and Hernando 2006).[8] Focarelli and Pozzolo (2001) claim that cross-border acquisitions are fewer in banking than in other sectors and that they increase in accordance to the size of the banking sector. In the present study we have a fair indication of why our derived sample of domestic deals outnumbers international ones in a yet smaller pace based on the size of the banking sector in the markets under examination,

Banking deregulation and the too big to fail concerns in turn stimulate cross-border and domestic deals respectively. European authorities have traditionally been keen on the consolidation of the banking sector. Regulators have repeatedly intervened, during the crisis, by backing acquisitions of risky banks by larger counterparts in order to prevent costly bank failures (Beltratti and Paladino 2013). However, Koetter et al,. (2007) point out that forced transactions of this sort generate negative feelings on the part of investors, thus resulting in a negative effect on short-term returns. The crisis itself has an impact on the bank stock returns since Beltratti and Stulz (2012) point out that banks with higher tangible equity better resisted the crisis period. In addition, Beltratti and Paladino (2013) confirm that the higher the profitability of the acquirer the higher the abnormal returns when analyzing the 3-day event window surrounding the agreement date.

The short-term impact of bank M&A announcement deals is still open to academic examination. There is an abundant literature that attempts to ascertain the existence of short-term abnormal returns for bidders, targets, as well as on a collective basis. Papers employing event study methodology still constitute a significant part of the ongoing academic work relating to Ms&As. Previous U.S. evidence reveal negative returns for acquirers, whereas the combined entities exhibit either insignificant or negative returns (Hudgins and Seifert 1996; Pilloff 1996; DeLong 2001; Amihud et al., 2002; Knapp et al., 2005). In contrast, bidder returns are found to be positive, following M&A announcements, though non-significant, in Kiymaz (2004). Kiymaz (2004) further explain the forces that drive abnormal returns, demonstrating that macroeconomic variables, including foreign and U.S. economic conditions, level of economic development of target country, exchange rate volatility along with the effectiveness of foreign government, relative size of participants, and control of target, largely explain the capital gains to bidders and targets.

Others U.S. studies report that, on average, target shareholders achieve positive and significant ARs, shareholders of acquiring banks achieve small negative ARs, and the combined ARs of acquirers and targets are insignificant (Houston and Ryngaert 1994; Hudgins and Seifert 1996; Pilloff 1996). DeLong and DeYoung (2007) report positive abnormal returns for bidders following M&A announcements. Targets are clearly considered to be the winners in the short-term. Studies on other international markets lean towards the existence of gains for both bidders and targets. Bessler and Murtagh (2002) provide evidence from Canada and find positive stock price reaction for cross-border Ms&As, while Williams and Liao (2008) find positive returns for both acquiring and acquired banks, using a sample of developed economies acquirers and targets from emerging markets. Goddard et al. (2012), using a similar sample of emerging market transactions, conclude that acquirers do not lose value, on average, and even gain when they geographically diversify.

Growing European evidence (Campa and Hernando 2006; Hagendorff et al., 2008; Beltratti and Paladino 2013) 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 Hernando (2006) examine the financial industry in Europe during 1998-2002 and find positive short-term returns for targets around the announcement day. Abnormal returns for bidders were zero, while target banks experiencing low operating performance were positively affected by the transaction in the long-run. Small positive short-term abnormal returns for bidder banks is the outcome in Hagendorff et al., (2008), who include though in their sample other non-financial firms. *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.*

Previous findings, of marginal or zero profits for bidders, apply also in the case of Lensink and Maslennikova (2008) where cross-border deals depict insignificant marginal losses and domestic Ms&As adversely exhibit statistically significant gains just above zero. Evidence of value creation from cross-border Ms&As are found in Schmautzer (2006), albeit only on a net basis with target gains considerably more than compensating for bidder marginal losses. Ismail and Davidson (2005) argue that domestic Ms&As are more profitable than cross-border ones for the 2-day announcement window (-1, 0).

[8] Bruner (2004) reports that at the peak of the 5th merger wave (1999) cross-border M&As in the US market amounted to $349.9 billion representing 25 percent of all transactions that took place.

Positive value creation is reported in Cybo-Ottone and Murgia (2000), where after analyzing 54 large European bank mergers during the period 1989–1997 the above holds for both bidders and targets. Bley and Madura (2003) explore the intra (within target's country) and inter-country (in European rivals countries) valuation effects of European M&A announcements. They find that the magnitude of the intra-industry effects on M&A announcements is proportional to the size of targets consistent with prior US evidence (see, for example, Houston and Ryngaert 1997). They also find evidence of inter-country effects suggesting that M&A announcements bring about spillover valuation effects not only for rivals within the country of the European target, but also for rivals of other European countries. Beitel et al. (2004) find a significant positive effect for combined banks on M&A announcement days, while Goergen and Renneboog (2004) investigate large bank takeovers and find statistically significant announcement effects in excess of four percent for target banks and not significant announcement effects for acquiring banks.

Ekkayokkaya et al. (2009) find that positive abnormal returns resulting from mergers are notably higher 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 claim that targets gain more through cross-border and small value deals. They also conclude that prior targets' performance impacts negatively on abnormal returns derived from the transaction announcement. While combined entities furnish mostly positive abnormal returns, the same does not apply for acquirers, where results are mixed.

Overall the existing literature on EU bank merger activity is consistent 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. Even though EU evidence for the acquiring bank's shareholders seem to vary considerably, there is a significant body of research in the last 15 years that has found marginal profits to be attainable by bidder banks. This represents a deviation from the commonly held view that bidders are usually losers in the short-term. Similar findings, of marginal or zero profits for bidders, with some notable exemptions (DeLong and DeYoung 2007), are scarcely found in the U.S. data. Europe, therefore, seems to provide a more favorable ground for bidder bank shareholders.

Regarding the long-term stock price performance of acquiring firms, DeLong (2001) find that US bidders lose in non-focused bank deals in the years following the M&A announcement. DeLong and DeYoung (2007) corroborate their main finding of significant negative returns in the post-bid period, while finding short-term positive returns that dissipate quickly. Becher and Campbell (2005) acknowledge an impact of the Riegle-Neal Act on post-merger performance, finding that geographic deregulation negatively affected bidder returns. Further U.S. evidence also suggest that Ms&As generate either negative or insignificant returns over the long-term. Knapp et al. (2005) find negative returns to shareholders in large bank deals, while Houston et al. (2001) claim that evidence is inconclusive on whether bank deals destroy or create share value during the post-merger period. Campa and Hernando (2006) examine the EU market and support main U.S. evidence leaning towards not significantly different from zero post-merger returns.

3 Research design

3.1 Data

We analyze Ms&As in the European markets that were initially announced from 1996 to 2010. We constructed our sample as follows. The announcement date of the M&A was set between 01/01/1996 and 31/12/2010. We restrict our attention to transactions involving public banking institutions with the same 2-digit Standard Industrial Classification (SIC) code. We also require that M&As had been completed. By setting appropriate filters to our derived results from the Bloomberg database, we ascertain that both parties are located in the Western European region, in the broader sense, with the exclusion, therefore, of Eastern European transactions. We searched for acquisitions that resulted in a majority stockholding in the target bank. Multiple Ms&As by the same bidder were excluded from the final dataset. The stock data and benchmark stock indices used contain daily closing prices 250 days prior and 10 days following the announcement of the deal.

3.2 Methodology

To measure abnormal stock market returns we employ standard event study methodology. For every deal, we calculate abnormal returns (ARs) separately for acquirers and sellers. We restrict our analysis to the cumulative abnormal returns (CARs) around an event window of 21 days (-10, +10). The market model, used in order to calculate the abnormal return achieved by firm i at time t, is estimated as follows:

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

R_{it} is the observed return of security i at time t; R_{mt} is the observed return on the benchmark at time t and ε_{it} is the residual. We estimate parameters α_i and β_i, respectively, by use of ordinary least squares (OLS). 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 stock i as follows:

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

For reconciliation purposes we employ throughout, as an alternative measure for the calculation of abnormal stock returns, the market-adjusted returns model. The model assumes an alpha coefficient of zero and a beta equal to unity. Hence, abnormal stock returns are calculated as follows:

$$AR_{it} = R_{it} - R_{mt} \quad (3)$$

Cumulative abnormal returns (CARs) have been computed for every bank over several event windows to capture the market reaction both 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), where t=0 is the announcement date. The CAR is the sum of the abnormal returns for each separate bank during that event window. The null hypothesis presupposes that the given event has no impact on the mean or variance of returns of the stock price. We employ the standardized cumulative abnormal return (SCAR) (Bessler and Murtagh 2002) as follows:

$$SCAR_{t(event)} = \frac{CAR_{t(event)}}{\sigma_{i(event)}} \quad (4)$$

σ_i is the standard error from the estimated regression. Since we use a 240-day estimation window, the standard normal distribution provides a reasonable approximation to the distribution of the SCARs.

In order to assess the long-term stock price performance of our sample of M&As we use two alternative approaches. First, we calculate buy-and-hold abnormal returns (BHARs), which are based on the geometric mean. Using daily data BHARs are computed for 6, 12, 18 and 24 months' time horizons subsequent to the M&A announcement date. They are calculated as the difference between the compounded actual return of the acquiring firm and the compounded return of the market.

$$BHAR_{it} = \prod_{t=0}^{T}[1 + R_{it}] - \prod_{t=0}^{T}[1 + R_{mt}] \quad (1)$$

R_{it} denotes the arithmetic return (including dividends) for every security I at time t.

R_{mt} is the arithmetic return on the value-weighted index at time t.

Following Pastor-Llorca and Martin-Ugedo (2004) we use the skewness-adjusted t-statistic in order to test the null hypothesis that the BHARs mean is zero as follows:

$$t_{Skewness-adjusted} = \sqrt{N}(S + \frac{1}{3}\hat{\gamma}S^2 + \frac{1}{6N}\hat{\gamma}) \quad (2)$$

N is the number of events in the sample, while S equals:

$$S = \frac{ABHAR_t}{[\sigma(BHAR_t)]} \quad (3)$$

$\hat{\gamma}$ is the coefficient of skewness, estimated as:

$$\sum_{i=1}^{N} = \frac{(BHAR_{i,t} - ABHAR_t)^3}{[N\sigma(BHAR_t)^3]} \quad (4)$$

$ABHAR_t$ and $\sigma(BHAR_t)$ are the sample mean and cross-sectional standard deviation of buy-and-hold returns for the sample of N events, respectively.

3.3 Sample

Table 1 presents the composition of the M&A sample. The majority of the deals analyzed is concentrated during the period 1999-2003 with a second wave of M&As occurring around the 2008 financial crisis. These two peaks refer to the creation of the Eurozone and the bull market conditions of the late 1990's, as well as the 6th merger wave that ended approximately late-2007 (Alexandridis et al., 2011). 40 out of the 152 deals included in the sample are classified cross-border, whereas domestic deals, dominating the market for bank M&As (Berger et al., 2001), represent over 70 percent of our sample. This feature pertaining our dataset should be taken under consideration before extracting conclusions from our full sample, since the literature highlights noteworthy differences in the short-term price behavior of the two subsamples.

The sample composition by country is presented in Table 2. We observe a high number of institutions from Italy, representing around one quarter of our sample, in the sample of acquiring banks. When examining targets, Spanish banks were targeted in one quarter of the transactions included in our sample. Collectively, Spain, Italy, Greece and Portugal account for 43.4 percent of the sample of bidders as well as constitute 40.1 percent of target banks. South Europe has been at the epicenter of both domestic and cross-border Ms&As, especially in the late 90's, when it was targeted by larger Northern European institutions, but also as a preventive measure for competitors' entry. Tables 3 and 4 display the sample of domestic and cross-border M&A deals per country, respectively. Italy seems to host a large proportion of domestic Ms&As (29.5%), while Spanish and Swedish banks had been involved in 8 and 7 cross-border Ms&As transactions, respectively.

Table 1. Distribution of bank M&As per year

Year	Number of M&As	%
1996	1	0.66%
1997	0	0.00%
1998	9	5.92%
1999	20	13.16%
2000	23	15.13%
2001	14	9.21%
2002	19	12.50%
2003	13	8.55%
2004	8	5.26%
2005	11	7.24%
2006	10	6.58%
2007	10	6.58%
2008	10	6.58%
2009	2	1.32%
2010	2	1.32%
Total	152	100.00%

Table 2. Distribution of bank M&As per country

	Acquirers			Targets	
Country	Number of M&As	%	Country	Number of M&As	%
Austria	1	0.66%	Austria	3	1.97%
Belgium	2	1.32%	Belgium	3	1.97%
Cyprus	3	1.97%	Cyprus	1	0.66%
Denmark	10	6.58%	Denmark	11	7.24%
France	18	11.84%	France	12	7.89%
Germany	24	15.79%	Germany	19	12.50%
Greece	9	5.92%	Greece	13	8.55%
Iceland	1	0.66%	Iceland	15	9.87%
Italy	36	23.68%	Italy	2	1.32%
Luxemburg	1	0.66%	Luxemburg	1	0.66%
Netherlands	4	2.63%	Netherlands	2	1.32%
Norway	3	1.97%	Norway	9	5.92%
Portugal	5	3.29%	Portugal	9	5.92%
Spain	16	10.53%	Spain	37	24.34%
Sweden	8	5.26%	Sweden	2	1.32%
Switzerland	5	3.29%	Switzerland	6	3.95%
UK	6	3.95%	UK	7	4.61%
Total	152	100.00%	Total	152	100.00%

	Number of M&As	%
Cross-border M&As	40	26.32%
Domestic M&As	112	73.68%

Table 3. Distribution of domestic bank M&As per country

Country	No. of obs.	%
UK	4	3.6%
Italy	33	29.5%
France	8	7.1%
Spain	11	9.8%
Germany	23	20.5%
Portugal	4	3.6%
Sweden	2	1.8%
Denmark	5	4.5%
Greece	13	11.6%
Switzerland	5	4.5%
Cyprus	2	1.8%
Norway	2	1.8%
Total	112	100.0%

Table 4. Distribution of cross-border M&As by country origin

	ACQUIROR COUNTRY												
TARGET COUNTRY	Belium	Cyprus	Denmark	France	Germany	Iceland	Italy	Luxemburg	Netherlands	Spain	Sweden	UK	TOTAL
Austria					1		1						2
Denmark											3		3
France	2											1	3
Greece		2		2	1								5
Germany							4				1		5
Italy				2	1				2	2			7
Malta												1	1
Norway			1			1					3		5
Portugal										4			4
Spain				1				1				1	3
UK										2			2
TOTAL	2	2	1	5	3	1	5	1	2	8	7	3	40

Table 5 presents summary statistics of the final sample. The first panel offers information on the subsample of acquirers. The most striking feature of the sample is the notable differences in the ROE distribution, where prices range from 31.06 percent to -2.22 percent. This variation in ROE is even more prominent in the sample of target banks depicted in the second panel of Table 3. The profitability ratio is between 21.73 and -26.23 percent. Therefore, our dataset confirms Vander Vennet (2002) in that acquirers outperform targets before M&A transactions. Bidders outpace targets in all facets of profitability and efficiency as measured by our suggested measures (i.e. ROA, profit margin, loans to deposits, loan loss reserves to non-performing assets and the capital adequacy ratio), in line with Cyree (2010), except for the non-performing assets to loans ratio that is more favorable in the case of target banks (1.51 percent compared to 2.57 percent for bidder banks). Overall, we can assert that both bidders and targets can perform well or poor in the prior to M&A era.

4 Empirical results

4.1 Short-term stock price performance of acquiring banks

This section reports the results from the analysis of the event windows identified in Section 3. We embark on our analysis of the short-term impact of new M&A deals on banks' stock price by focusing on bidders' stock performance. Table 6 summarizes our derived empirical findings for the sample of bidders. We find evidence of insignificantly negative returns in the post-merger 10-day event window (+1, +10) that amount to -0.377% and -0.288%, when using the market model (Panel A) and the market-adjusted model (Panel B), respectively. Campa and Hernando (2006) find similar results, whereby markets priced poorly acquirer stocks after the announcement of the M&A deal. Abnormal returns are negative, but not statistically significant for the 3-day event window (-1, +1). CARs for the aforementioned period are -0.174% for the market model and -0.056% for the market-adjusted model. Our findings corroborate Rad and Van Beek (1999) in that short-term abnormal returns at the announcement date are negative (though non-significant) for acquirers. In contrast, Tsangarakis et al. (2013) derive some marginally positive returns during the same event window, which are, however,

non-significant. With the exception of the (-1, 0) event window, CARs are marginally positive in the examined periods preceding the announcement, but the absence of statistical significance does not allow us to make direct inferences of information leakage. This is in contrast to Cybo-Ottone and Murgia (2000) who found that information dissemination, on the possibility that a deal will be announced soon, is existent.

Table 5. Descriptive statistics for acquirer and target banks in the year of the M&A

Acquirer banks	Mean	Median	St. Deviation	Max	Min
ROA (%)	6.47	5.95	4.29	21.35	-8.50
ROE (%)	12.61	12.15	6.13	31.06	-2.22
Loans to Deposits (%)	156.08	134.73	104.84	786.44	35.02
Non-performing assets to loans (%)	2.57	2.19	1.80	6.45	0.14
Capital Adequacy (%)	6.10	5.40	3.20	16.50	1.10
Profit Margin (%)	18.01	17.47	9.68	46.98	-2.25
Loan Loss Reserves to Non-performing assets (%)	132.99	100.15	96.73	424.81	27.41
Total Loans to Total assets (%)	54.37	55.41	15.26	84.12	14.20
Target banks	Mean	Median	St. Deviation	Max	Min
ROA (%)	4.61	4.79	4.86	17.13	-11.05
ROE (%)	7.33	8.85	8.62	21.73	-26.23
Loans to Deposits (%)	193.58	138.28	187.64	1118.50	77.45
Non-performing assets to loans (%)	1.51	1.31	0.89	4.13	0.38
Capital Adequacy (%)	6.50	6.00	3.20	13.90	2.10
Profit Margin (%)	11.57	11.80	16.23	45.41	0.10
Loan Loss Reserves to Non-performing assets (%)	130.25	111.21	64.62	307.09	60.35
Total Loans to Total assets (%)	62.90	63.78	11.51	87.21	39.15

We attempt to highlight the previously documented prevalent role of profitability on explaining abnormal returns (Hagendorff et al., 2012) by splitting our sample of bidders into those bearing above mean ROE and those with below mean ROE one year prior to the M&A (profitability threshold ROE = 13.32%). Based on the inefficient management hypothesis the acquisition of inefficient entities by a more efficient one results in the overall efficiency of the merged converging to that of the acquirer firm (Rad and Van Beek 1999). We conjecture that the higher the ROE, the higher the bank's efficiency. Results for low ROE banks depict negative CARs for both the 5-day and the 10-day event windows that follow the deal announcement. More specifically, the market-adjusted model yields a CAR of -0.561% for the (+1, +5) and -0.893% for the (+1, +10) time horizons. Likewise, results for the subsample of high profitability bidders are negative for the 10-day post-event investment horizon, but remain non-significant. High ROE bidders experience gains of approximately 0.3% in the 5-day event window after the announcement. The absence of prior to announcement significant CARs make us to deduce that information leakages is not a real phenomenon. The fact that we observe high ROE post-announcement cumulative returns to be either weaker in magnitude than overall sample losses (+1, +10) or even gains to be achievable (+1 +5), coupled with the slightly higher losses for the subsample of low ROE banks relative to the full sample results, allow us to infer that prior profitability has some effect on CARs, even though not statistically significant.

The reluctance of investors to favor an M&A by a low profitability bank is consistent with Lozano-Vivas et al. (2011), who conclude that domestic Ms&As usually involve a more profitable bidder and a less profitable target. Presumably, when low profitability bidders engage in an M&A, this provides a negative signal to its existing and potential shareholders. When the above finding is accompanied with a high bid premium, this is essentially viewed as the bidder bank paying excessively for an M&A, whose successful outcome is by theory questionable. The fact that this bidder bank is already inefficient relative to its peers, as evidenced by its low ROE, creates a negative perception to the market. Nnadi and Tanna (2013) find a negative relationship between acquirers' profitability and their value creation. They argue that this inverse relationship implies the need for restructuring processes required before efficiency, as measured by ROE, to be restored.

Table 6 also report our empirical estimates for the sample of international and domestic bidders involved in M&A transactions. Mixed evidence on the impact of cross-border M&As on bidder stocks leads us into not having a priori expectations about the possible outcome. In line with Cybo-Ottone and

Murgia (2000), who investigated the financial services sector, we find positive abnormal returns for bidders in cross-border deals when examining the whole 21-day investment horizon. Abnormal returns in the post-merger period are significantly negative for within-border Ms&As. The (+1, +10) CAR is 0.600% for cross-border deals and -1.396% for domestic ones when the market model is employed (panel A). Nevertheless, only domestic bidders appear to have statistically significant results. The fact that cross-border deals' results do not allow definite conclusions is marked by the negative CARs for a number of smaller event windows, such as (-5, +5), (-1, 0), (-1, +1) and (+1, +5). In the latter event window, the market model produces a -0.342% abnormal return, though still not significant. Likewise, the 3-day event window (-1, +1), renders negative abnormal returns in the case of cross-border M&As for both the market and the market-adjusted model (-0.983% for the former and -1.071% in the latter case). Moreover, the (-5, +5) event window of international M&As also depicts negative CARs (-0.364% and -0.187% for the two employed models) that are strengthened in magnitude especially during the announcement period. This result is in line with Tsangarakis et al. (2013) that report a negative return below 1% for the same examination period. Significantly negative abnormal results for cross-border deals are also consistent with Rad and Van Beek (1999), Campa and Hernando (2006) and Lensink and Maslennikova (2008).

These results underline the riskiness of cross-border Ms&As as it has been previously documented (Berger et al., 2001). We can also argue that this negative stock price reaction in the case of cross-border deals is linked to the perception of the market on the future profitability opportunities of the bidder's domestic activities. Doukas and Travlos (1988) point out that investors are doubtful that the management of a bidder bank engaging in international activities could sustain the previous growth rates, given the need to devote time and resources to the long-run success of the cross-border acquisition.

In the case of domestic deals, bidders' losses, for all the event windows encircling the M&A announcement, that is the (-10, +10), (-5, +5) and (-1, +1), corroborate empirical evidence by Tsangarakis et al. (2013). Their results, similarly to our empirical results, bear no statistical significance. Nonetheless, the statistically significant negative abnormal returns found for the 10-day post-event period allows us to infer that investors are concerned about costly integration processes of dissimilar institutions in terms of costs, deposits and strategies, as previously pointed out by Altunbas and Marques (2008). A further impediment to wealth creation for acquirers from domestic mergers is their inner motive. Examples of ill-motivated deals that could impact our results are those triggered by regulators wishing to avoid failures of smaller and inefficient institutions (Demirguc-Kunt and Huizinga 2010).

4.2 Short-term stock price performance of target banks

Table 7 outlines our derived results for the target banks involved in both domestic and cross-border M&A announcements. The clear indication is that target banks enjoy lucrative returns over the short-term. Notice that ARs on the announcement date are 2.237%, statistically significant at the 1% level. This result is accompanied with a further price appreciation of approximately 0.4% both one day before and one day after the announcement. Collectively, over the 3-day event window (-1, +1) CARs amount to 3.096% and 2.483% when using the market model (panel A) and the market-adjusted model (Panel B), respectively. Estimated CARs are positive and significant during all the examination periods with the exception of the (+1, +10) event window, where abnormal returns are collectively marginally negative, but not significant. The market model shows positive abnormal returns of 2.866% for the entire examination period (-10, +10), as well as for the (-5, +5) event window, with gains rising to 3.252%. The latter result is almost double in magnitude relative to the Goddard et al. (2012) targets' cumulative return of 1.596%. The estimated positive abnormal returns for the (-5, -1) event window are indication of possibly information leakage, in line with Goddard et al. (2012). 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, thus relying only on event windows that include both pre- and post-announcement trading days.

Given our previously explained motivation regarding the role of prior profitability we split our sample of target banks in high and low ROE to test for differences in short-term performance between the two subsamples. Hagendorff et al. (2012), employing cross-sectional regression analysis, claim that ROE has a positive effect on abnormal returns. Table 7 provide our estimates for the subsamples of high and low prior ROE targets (ROE threshold = 6.07%) respectively. Interestingly, high ROE banks depict even higher than overall sample gains, when examining the 21-day examination period and the (-5, +5) event window. More specifically, overall gains amount to 4.393% and 4.787% with the two prescribed estimation models, respectively, while ARs on the day of the announcement are still notably high (1.876% for the market model), though smaller than the collective sample results. The other event windows remain positive in the case of highly efficient banking institutions, but returns are smaller compared to those for the overall sample.

Table 6. Abnormal returns (AR) and cumulative abnormal returns (CAR) of acquirer banks

Panel A: Abnormal (ARs) and cumulative abnormal returns (CARs) for acquirers as computed by the market model										
Period	All acquirers	t-statistic	High ROE	t-statistic	Low ROE	t-statistic	Cross-border	t-statistic	Domestic	t-statistic
Day -1	-0.045	-0.18	0.012	0.04	-0.093	-0.22	-0.403	-0.61	0.106	0.42
Day 0	-0.133	-0.54	-0.430	-1.54	0.067	0.16	-0.306	-0.47	-0.133	-0.52
Day +1	0.004	0.02	-0.274	-0.98	-0.005	-0.01	-0.274	-0.42	-0.095	-0.37
(-10 -1)	0.823	1.05	1.003	1.13	0.624	0.47	0.672	0.32	0.881	1.10
(-5 -1)	0.415	0.75	0.635	1.01	0.278	0.29	0.284	0.19	0.534	0.95
(-1 0)	-0.178	-0.51	-0.418	-1.06	-0.026	-0.04	-0.709	-0.76	-0.027	-0.08
(-10 +10)	0.313	0.28	0.321	0.25	0.024	0.01	0.966	0.32	-0.648	-0.56
(-5 +5)	0.147	0.18	0.512	0.55	-0.038	-0.03	-0.364	-0.17	-0.018	-0.02
(-1 +1)	-0.174	-0.41	-0.692	-1.43	-0.031	-0.04	-0.983	-0.86	-0.122	-0.28
(+1 +5)	-0.135	-0.24	0.307	0.49	-0.383	-0.40	-0.342	-0.23	-0.419	-0.74
(+1 +10)	-0.377	-0.48	-0.252	-0.28	-0.667	-0.50	0.600	0.29	-1.396*	-1.75
Panel B: Abnormal and cumulative abnormal returns for acquirers as computed by the market-adjusted model										
Period	All acquirers	t-statistic	High ROE	t-statistic	Low ROE	t-statistic	Cross-border	t-statistic	Domestic	t-statistic
Day -1	-0.013	-0.08	0.130	0.58	-0.101	-0.68	-0.426	-1.59	0.206	1.16
Day 0	-0.148	-1.00	-0.562*	-1.85	0.047	0.12	-0.374	-1.47	-0.138	-0.74
Day +1	0.106	-0.39	-0.313	-1.10	-0.007	-0.02	-0.271	-1.20	-0.192	-0.52
(-10 -1)	0.698	1.18	1.183	1.32	0.838	1.00	0.653	0.73	1.035	1.35
(-5 -1)	0.534	1.28	0.766	1.21	0.487	0.82	0.322	0.51	0.853	1.58
(-1 0)	-0.161	-0.61	-0.431	-1.08	-0.054	-0.14	-0.800	-1.01	0.068	0.20
(-10 +10)	0.261	0.30	0.226	0.17	-0.009	-0.01	0.993	0.77	-0.797	-0.72
(-5 +5)	0.430	0.69	0.564	0.60	-0.027	-0.03	-0.187	-0.20	0.114	0.14
(-1 +1)	-0.056	-0.17	-0.744	-1.52	-0.061	-0.13	-1.071	-1.19	-0.124	-0.30
(+1 +5)	0.045	0.11	0.360	0.57	-0.561	-0.95	-0.134	-0.21	-0.602	-1.11
(+1 +10)	-0.288	-0.49	-0.395	-0.44	-0.893	-1.07	0.714	0.80	-1.693**	-2.21

Note: Abnormal returns (in percentages) are calculated using the market model as follows: $AR_{i,t} = R_{i,t} - (\hat{a}_i + \hat{\beta}_i R_{m,t})$ where $R_{i,t}$ is the return of firm i on day t and $R_{m,t}$ is the market return on day t. Abnormal returns are calculated using the market-adjusted model as follows: $AR_{i,t} = R_{i,t} - R_{m,t}$. ***, ** and * denote statistical significance at 1%, 5% and 10%, respectively.

The 3-day event window (-1, +1) shows a positive and statistically significant CAR of 2.389% when using the market model and 2.408% when using the market-adjusted model. Some evidence of front-running by investors are also observable, as one can infer from the positive and significant 2.245% gain in the (-10, -1) event window, when the market-adjusted model is used. In the case of high profitability targets, even the 10-day post-merger event window provides positive abnormal returns, though not significant. The above results contradict Tsangarakis et al. (2013) that report a negative relationship between prior profitability and targets' abnormal returns, but are in line with Hagendorff et al. (2008). An interesting affirmation explaining this behavior claims that highly profitable targets might become subject to a bid premium contest by alternative buyers (Hagendorff et al., 2012), thus launching value creation through the transaction. Moreover, based on the inefficient market hypothesis we could deduce that the market perceives already profitable targets as more efficient candidates for further profit enhancement.

On the other hand, the markets allots gains to low profitability targets as well, but only over the event periods surrounding the agreement dates. More specifically, CARs for the (-1, +1) are estimated at 2.976% and 1.924% by use of our two alternative estimation models. The (-1, 0) event window also reports positive and significant results. ARs are even higher at the day of the event vis-a-vis for the high ROE sample, but on the days following markets appear to gauge the overall impact of the deal negatively. Both the market model and the market-adjusted model depict a collective loss of 2.013% and 2.064% over the 21-day examination period. This represents a result totally different than high ROE estimates. Losses are realized for most of the other sub-periods analyzed. Ismail and Davidson (2005) claim that there exist forces that render low efficiency targets unattractive to investors, at least over short-term horizons. It appears that, as confirmed by Hagendorff et al. (2012), profitability does influence significantly the value creation utility process of targets since banks with high profitability one year prior to the M&A are by far more plausible candidates for a transaction. The fact that target banks' performance improves after the M&A (Campa and Hernando 2006) does not seem to mitigate the apparent reservations of the stock market towards past "bad performers".

We report independently short-term abnormal returns of target banks for domestic and cross-border deals. Cross-border deals for target banks are seemingly the most profitable investment opportunity analyzed in our dataset. Short-term abnormal returns for the 21-day investment period exceed the 5% threshold. The 3-day event window abnormal returns are also significantly positive since the market model renders a 4.035% gain and the market–adjusted model 4.005%, both statistically significant at the 1 percent level. ARs at announcement day are over 3%. Analogous positive and significant spikes are found at 1 day before the event, revealing that positive excess returns are most likely stemming from premature information leakage. This information leakage phenomena are also observable in the (-5, -1) event window, as evident by the positive and significant abnormal return of 1.604%. Moreover, these figures show that the overall abnormal return can be mostly attributed to these few large positive daily abnormal returns.

All event windows show that gains are achieved, with the exception of the 5-day post event window, where marginally negative abnormal results are not significant. Our estimates are in line with Kiymaz (2004), Ismail and Davidson (2005), Campa and Hernando (2006) and Schmautzer (2006) among others. However, Tsangarakis et al. (2013) find gains for cross-border M&A targets in the region of almost 15% for the 21-day event window, threefold higher from our derived results.

The sample of domestic targets has significantly smaller gains. Statistically significant abnormal returns, slightly above 2%, are observable over both the (-1, +1) and the (-5, +5) event windows. Even though our results, lag relative to Campa and Hernando (2006), who found a 3-day CAR of 2.99% and Tsangarakis et al. (2013) that reported 6.52% gains, we can still conclude that domestic M&As elicit positive abnormal returns opportunities for investors in acquired banks. However, the relative absence of statistical significance for the 21-day event window, limits our main conclusions to the value created over shorter event windows.

4.3 Long-term stock price performance of acquiring banks

We explore the long-term stock price impact emanating from the M&A operation by computing returns over 6, 12, 18 and 24 month periods subsequent to the merger. Table 8 illustrates the long-term impact of the deal for the overall sample of M&As. We find that buy-and-hold returns (BHARs) are negative and significant for the 6-month examination period exhibiting abnormal losses of slightly above 2 percent for acquirers in the post-merger period. Results are positive, but not statistically significant for longer examination horizons. Nonetheless, the main robust finding remains that of negative wealth effects for acquirer bank shareholders. This finding is in line with the vast majority of the related literature (indicatively DeLong and DeYoung (2007) and Campa and Hernando (2006) for the US and European market, respectively).

Table 7. Abnormal returns (AR) and cumulative abnormal returns (CAR) of target banks

Panel A: Abnormal (ARs) and cumulative abnormal returns (CARs) for targets as computed by the market model										
Period	All acquirers	t-statistic	High ROE	t-statistic	Low ROE	t-statistic	Cross-border	t-statistic	Domestic	t-statistic
Day -1	0.432*	1.88	-0.095	-0.27	0.252	0.4	0.748**	2.01	0.358	1.22
Day 0	2.237***	9.77	1.876***	5.40	2.044***	3.26	3.401***	9.14	1.146***	3.9
Day +1	0.427*	1.87	0.608*	1.75	0.68	1.09	-0.113	-0.3	0.768***	2.61
(-10 -1)	1.175	1.62	1.642	1.49	-1.785	-0.9	1.345	1.14	1.077	1.17
(-5 -1)	1.006**	1.97	0.871	1.12	-0.158	-0.11	1.604*	1.93	0.781	1.2
(-1 0)	2.669***	8.24	1.781***	3.62	2.296***	2.59	4.149***	7.88	1.505***	3.66
(-10 +10)	2.866***	2.73	4.393***	2.76	-2.013	-0.7	5.147***	3.02	1.371	1.03
(-5 +5)	3.252***	4.28	3.291***	2.85	0.241	0.12	4.925***	3.99	2.177**	2.26
(-1 +1)	3.096***	7.80	2.389***	3.97	2.976***	2.74	4.035***	6.26	2.273***	4.51
(+1 +5)	0.009	0.02	0.544	0.70	-1.645	-1.17	-0.079	-0.1	0.25	0.38
(+1 +10)	-0.546	-0.75	0.875	0.80	-2.272	-1.15	0.401	0.34	-0.853	-0.93
Panel B: Abnormal and cumulative abnormal returns for targets as computed by the market-adjusted model										
Period	All acquirers	t-statistic	High ROE	t-statistic	Low ROE	t-statistic	Cross-border	t-statistic	Domestic	t-statistic
Day -1	0.362	1.51	-0.059	-0.19	-0.326	-0.34	0.570	1.29	0.341	1.19
Day 0	1.757***	3.56	1.776**	2.31	2.063*	1.81	3.681***	3.48	0.953*	1.81
Day +1	0.364	0.85	0.691	1.18	0.787	0.53	-0.246	-0.79	0.724	1.21
(-10 -1)	1.311	0.92	2.245*	1.76	-1.772	-0.95	1.353	0.61	1.267	1.18
(-5 -1)	1.302	1.28	1.282	1.42	-0.543	-0.41	1.818**	2.37	1.074	1.41
(-1 0)	2.119***	3.31	1.717***	3.01	1.738**	2.09	4.251***	4.27	1.293***	2.69
(-10 +10)	2.471**	2.19	4.787***	2.59	-2.064	-0.76	5.168***	2.60	1.396	0.90
(-5 +5)	3.028**	2.01	3.361**	2.51	0.515	0.26	5.427**	2.33	2.183*	1.94
(-1 +1)	2.483***	3.16	2.408***	3.44	2.525**	2.47	4.005***	3.29	2.017***	3.42
(+1 +5)	-0.031	-0.03	0.303	0.33	-1.006	-0.76	-0.072	-0.05	0.157	0.21
(+1 +10)	-0.597	-0.42	0.766	0.6	-2.355	-1.26	0.133	0.06	-0.824	-0.77

Note: Abnormal returns (in percentages) are calculated using the market model as follows: $AR_{i,t} = R_{i,t} - (\hat{a}_i + \hat{\beta}_i R_{m,t})$ where $R_{i,t}$ is the return of firm i on day t and $R_{m,t}$ is the market return on day t. Abnormal returns are calculated using the market-adjusted model as follows: $AR_{i,t} = R_{i,t} - R_{m,t}$. ***, ** and * denote statistical significance at 1%, 5% and 10%, respectively.

When analyzing the subsamples of cross-border and domestic deals, we find negative returns for the latter, which, however, are not statistically significant at any conventional level. In contrast, the cross-border consolidations offer robust evidence, over the 24-month post-merger event window, that M&A activity creates profit gains opportunities over the long-term. Stock price gains extend in the interval of 0.941% to 7.961% becoming stronger and more statistically robust the longer the time horizon examined. These results are consistent with Resti and Siciliano (2001) that found significant excess returns of 17.3% in the first 12 months following the acquisition for a sample of both within- and cross-border deals in Italy. Moreover, our estimates corroborate the growing notion of cross-border deals being value enhancing both upon the deal announcement and in the post-merger period (Lozano-Vivas et al., 2011).

Table 8. Buy-and-hold abnormal returns (BHARs) for the full sample of acquirers

Panel A: Buy-and-hold abnormal returns (BHARs) for the full sample of acquirers		
	BHARs %	adjusted t-statistic
6 months mean	-2.080*	-1.76
12 months mean	0.741	0.43
18 months mean	2.206	1.03
24 months mean	1.164	0.53
Panel B: Buy-and-hold abnormal returns (BHARs) for the sample of cross-border M&As		
	BHAR (%)	adjusted t-statistic
6 months mean	0.941	0.3
12 months mean	4.666	1.38
18 months mean	5.397	1.32
24 months mean	7.961*	1.7
Panel C: Buy-and-hold abnormal returns (BHARs) for the sample of domestic M&As		
	BHAR (%)	adjusted t-statistic
6 months mean	-3.294	-1.52
12 months mean	-2.767	-0.97
18 months mean	-1.575	-0.46
24 months mean	-1.54	-0.33

4.4 Factors affecting targets' short-term abnormal returns

In a rationale similar to Hagendorff et al. (2008 and 2012) we use pooled cross-sectional regression analysis to investigate further the impact of particular features of target companies on the market reaction caused in the event of a bank merger announcement. Campa and Hernando (2006), Beitel et al. (2004) and Nnadi and Tanna (2013) also attempted to analyze the factors that influence the value creation process in financial institutions. We use the average abnormal return of target banks as calculated by the market model alone as dependent variable. The explanatory variables used are the systematic risk (beta) as calculated by the market model in the estimation period (-250, -11), a dummy variable to distinguish between cross-border and domestic deals, the non-performing assets to total loans, the profit margin, total assets and lastly loan loss reserves to non-performing assets. Table 9 sums our derived findings.

In model 1 we regress abnormal returns against the systematic risk, the dummy variable and non-performing loans to total assets. We observe that the variable accounting for the bank's assets exerts a negative and significant impact on abnormal returns. This result suggests that when target banks encounter high percentages of non-performing loans the impact of M&A announcement is mitigated. Model 2 reiterates Model 1 by adding the profit margin variable. Results suggest that the profit margin variable has a positive impact on abnormal returns. This finding, in line with Nnadi and Tanna (2013), shows that the inclusion of financial factors adds value to the M&A process. In order to estimate whether the inclusion of further variables affects the influence of operating efficiency, Models 3 and 4 add to the previous model, in turn, the total assets and the loan loss reserves to non-performing assets variable. Both exert a negative and significant effect on abnormal returns. Therefore, the higher the size of the target bank and the reserves set aside towards "bad loans" the lower the returns of target banks. Presumably banks that have high loan loss reserves do not use their assets productively, in line with the rationale of an contractionary credit policy. Hence, profitability is expected to be smaller in the future. Put differently, markets seem to punish conservative banks. Likewise, investors favor smaller and more efficient banks, as evidenced by the positive and significant coefficient of the profit margin explanatory variable in model 4. The size issue of banks and its impact on abnormal returns

is constantly revisited in the literature (Cyree 2010). Finally, the identity of M&A deals (cross-border vs. domestic) does not seem to explain the abnormal returns on day 0 in all models.

Table 9. Factors explaining M&A short-term value creation effects

	Model 1	Model 2	Model 3	Model 4
Constant	0.035 (2.86)***	0.013 (0.73)	0.015 (0.80)	0.039 (1.80)*
Dummy	0.016 (0.78)	0.019 (0.93)	0.017 (0.81)	0.021 (1.02)
Beta	-0.008 (-0.45)	-0.003 (-0.17)	-0.001 (-0.01)	-0.001 (-0.03)
NPATL	-0.004 (-1.70)*	-0.003 (-0.63)	-0.003 (-0.72)	-0.007 (-1.29)
PM		0.001 (1.94)*	0.001 (1.95)*	0.001 (1.87)*
TA			-0.001 (-3.33)***	-0.001 (-2.95)***
LLRNPA				-0.001 (-1.82)*
Year fixed effects	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
Adjusted-R^2	0.034	0.027	0.027	0.047
F-statistic	2.86***	2.51*	2.42**	2.59***

Note: The dependent variable is the abnormal return (AR) on day 0 as calculated by the market model. Explanatory variables include the systematic risk (beta), as calculated from the market model, the non performing loans relative to total loans (NPATL), a dummy variable that takes the value of 1 for cross-border M&As and 0 for domestic M&As, the profit margin (PM), total assets (TA), and lastly the loan loss reserves to non-performing assets (LLRNPA).

*, ** and *** denote statistical significance at the 10%, 5% and 1% level, respectively.

5 Conclusions

European integration, the single currency adoption, market deregulation and the Basle Accord directives are the key factors that fuelled the surge into bank M&As in Europe in the eve of the 21st century. The unprecedented pace of financial integration has affected essentially the everyday practice of business. The evolution of the European marketplace as a key determinant of economic prosperity worldwide is of particular interest given the central role that the banking sector plays in economic activity. The question is whether these market conditions have significantly altered previously acquired knowledge on the mechanisms that cause gains or losses to banking institutions involved in M&A activity.

In this context the aim of this paper was to shed light on the value creation service offered by bank M&As in the European market. We used the classical event study methodology to determine whether significant abnormal returns can be found over the short-term for both acquirer and target banks, placing particular emphasis on the role of prior profitability in influencing the market's perception of a soon to be realized deal. The empirical analysis was carried out on a geographically diversified sample of announced deals that eventuated in an M&A transaction during an extensive period of 15 years (1996-2010). Hence, we gather that our sample is free of selection bias that could potentially lead to overvaluation of targets and undervaluation of bidders (Lensink and Maslennikova 2008).

By contrast with the recent literature results (Beltratti and Paladino 2013) we find that acquirers' distribution of excess returns deviates from their perceived alignment with the efficient market hypothesis (Fama et al., 1969). Average excess returns are weak and negative and of the order -0.3% in the 10-day post-announcement period. This negative market reaction is particularly pronounced in the case of low prior profitability bidders and especially amongst within-border mergers. In line with Hagendorff et al. (2008), we also find marginally negative abnormal returns during the 3-day event window around the announcement date. Collectively, these results indicate that investors seem skeptical over bidders reaping profits from an M&A. This preponderance of negative patterns of abnormal returns is more pronounced over longer examination horizons. However, the lack of statistical significance in most acquirer cases make us cautious to infer about the negative market reaction of acquirers to M&As deal announcements.

In line with Campa and Hernando (2006), we observe differences on targets' short-term stock price behavior depending on whether an M&A is domestic or international. However, even though abnormal returns are significantly positive for both short-run

pre-announcement and post-announcement windows, in the case of cross-border mergers returns are significantly higher, thus setting a notable difference with the Campa and Hernando (2006) empirical results, whereby domestic transactions were proven more profitable. The apparent prevalence of positive abnormal returns applies also to both high and low profitability targets around the event announcement date. However, when examining low ROE targets' abnormal returns during the period commencing 10 days before until 10 days after the announcement of the deal, abnormal returns become negative, whereas for high ROE banks they remain significantly positive throughout the aforementioned period. This striking difference, coupled with analogous findings for the sample of low ROE bidders, underlines the importance of prior profitability in assessing the likelihood of short-term value creation upon the announcement of a transaction.

Another task of our paper is the investigation of the long-term performance of acquiring banks. By calculating buy-and-hold returns over two years following Ms&As, our results suggest the existence of negative stock price long-term returns, in line with the pertinent literature. Surprisingly the long-term stock price behavior of cross-border Ms&As is distinctively different since over the 2-year post-merger time horizon returns are significantly positive for bidder banks. This positive market reaction, leads us to conclude, in accordance with Hagendorff et al. (2008), that there exist opportunities for profits to be reaped from the cross-border consolidation of banking assets. This market reaction is economically significant and averaged almost 8%.

Lastly we have looked at the factors that play a role in explaining target M&A announcement returns. Using regression analysis we conclude that the key determinant explaining short-term abnormal returns is past profits, as represented by the profit margin. Loan loss reserves to non-performing assets and target banks' total assets also exert a statistically significant negative impact on abnormal returns.

The lack of a balanced dataset between cross-border and domestic deals analyzed represents a noteworthy caveat that one should consider before making direct inferences towards the differences in behavior between the two subsamples. A possible further line of research should gauge differences upon the profitability experienced during the year of the announcement for public firms that by law issue interim financial results. Moreover, further banks' characteristics, with respect to profitability and efficiency, should be further scrutinized so as to make robust affirmations towards the impact of the current financial situation faced by bidders and targets to their short-term performance at the event of an M&A. Last but not least, the employment of a jump diffusion model similar to that of Kiymaz and Kilic (2004) would help us to disentangle the impact of informed trading from unanticipated component in explaining daily stock returns to M&A announcements.

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