MEASURES OF MARKET REACTION IN MERGERS AND ACQUISITIONS IN ITALY

Fabrizio Palmucci*, Annalisa Caruso**

Abstract

This paper presents an event study on mergers and acquisitions (M&A) between publicly listed Italian banks. Our study suggests that previous literature may have only partially captured the market reaction by choosing the announcement date as the event date. In less efficient markets the announcement date can be too late to allow the market reaction to be recorded, especially where information has been previously leaked. Using the rumour date and other event windows we can show that there is a portion of market reaction which has not been captured by previous research. Moreover, we are also able to present evidence of other characteristics affecting market reaction to M&A in the Italian banking sector.

Keywords: mergers and acquisitions, banking sector, event study, rumours

**Assistant Professor at SA - Department of Management, University of Bologna*
Contacts: via Capo di Lucca, 34, 40126 Bologna, Italy
***PhD at SA - Department of Management, University of Bologna*

1. Introduction

Mergers and acquisitions have been studied in-depth by theoretical and empirical literature investigating the reasons for and the effects of such operations. Previous studies have found several common results, such as the gains for target shareholders, and several contradictory results, such as those related to the overall value creation from M&As.

In this paper we attempt to demonstrate that previous literature has at least in certain cases failed to correctly measure the market reaction, owing to the use of the announcement date that is at times fixed too late and therefore does not acknowledge the actual moment of information arrival on the market. Instead of accounting for this anticipation by using larger event windows, as all previous studies do, we attempt to identify the date of the first rumours regarding the M&As and to show that this allows us to acquire a different component of the market reaction which tends not to be included in the classic event studies' windows. Consequently, we can also conclude that the economic relevance of the observed market reaction is underestimated.

The methodology we use allows us to pinpoint the information arrival on the market in different moments in time and is therefore better suited to markets with a less efficient price discovery process or where the insider trading regulations are less enforced. Moreover, in order to fully understand who gains and who loses, when the market reacts and possibly why, we need a sample of deals where both the bidder and the target firms are publicly listed.

As a consequence of these premises, the Italian banking sector is an ideal candidate for our study for two reasons: firstly the Italian market is recognised as having a low level of enforcement with regards to insider trading regulations (i.e. Linciano, 2003); secondly the Italian banking sector experienced most of its privatisation processes in the nineties and consequently offers a relatively large number of M&A deals between listed banks compared with other sectors and other countries. This is also confirmed by Cybo-Ottone and Murgia (2000), with whom we share the decision to focus on a single industry, in order to avoid the problem of interpretation of cross-industry variability in the results.

Our empirical investigation starts with the identification of three different event dates for each deal, that is: the announcement date of the event, that one used in the majority of previous research, the date when the market knows for certain if a deal has succeeded or failed, and, most importantly, the date of the first rumour regarding the event. Our results show that this last date is perhaps even more significant than the others in highlighting market reaction to new information but cannot replace them. The date is purely complementary, in that it often indicates a different part of the market reaction.

Given certain peculiarities relating to the Italian market, such as the presence of non-voting shares (NV-shares), we also attempt to provide answers with

regards to the presence of private benefits in M&A motivations, and other characteristics, of the operations and the banks involved that drive the results.

We find, as in earlier studies, that target banks' shareholders obtain benefits from a takeover, while the bidders' ones do not. The overall value creation (or destruction) of such deals is not clear, since it changes with different event date's specifications however an analysis of a subsample of NV-shares gives us additional insights. Given that the market value of this class of shares depends only on future cash flows, since they do not have voting rights, the fact that their performances tend to be worse than the voting shares of the same companies lead us to hypothesize that the M&As destruct value in order to extract private control benefits rather than creating value by improving the efficiency of the acquired bank.

The rest of the paper is organized as follows: the next section briefly reviews the literature available on M&As in the banking sector; Section 3 describes the sample and the methodology; Section 4 is entirely dedicated to the empirical results while Section 5 concludes.

2. Literature on M&A deals in the banking sector

In the existing literature (e.g. Jensen and Ruback, 1984, Berkovitch and Narayanan, 1993), the commonly recognised factors justifying M&A deals can be divided into two main groups: factors that are supposed to increase shareholder's wealth and those that are beneficial to management (private benefits). Within the first category we have the economies of scale and scope (see Boot, 2003, for specific treatment of the banking sector), the increase in market power (i.e. monopolistic advantage), and other motivations of speculative nature (i.e. tax benefits and market discipline for inefficient managers).

Private benefits of control, which are particularly important in Italy (see Zingales, 1994, and Dick and Zingales, 2004, for a full discussion of NV-shares and pyramidal structure of groups), are the unknown factors in M&A deals: in fact, they may be responsible for the acquirers' management overbidding on a target, without reference to value creation goals and leading to a loss of wealth for the acquirer's shareholders.

Theoretical literature has proposed additional reasons to explain concentrations in the banking sector (e.g. see Hawawini and Swary, 1990, and Vander Vennet, 1996). For example, the purpose of reaching the status of 'too large to fail', in which case the Central Bank will support the bank in case of need. Furthermore, the globalization of the economy and the integration of international financial markets oblige banks to be large enough to compete internationally. Finally, in the specific case of Italian banks, we have to stress the importance of the role played so far by the Bank of Italy, the supervisory authority, which often promotes or guides the deals.

The actual value creation resulting from an M&A deal is still an ongoing debate. This controversial issue has mainly been studied in empirical literature using two distinct approaches: the first one is based on the financial performances of firms using accounting data (FP approach), while the second approach applies the event-study methodology.

Furthermore the first approach investigates the ex-post changes in indicators of profitability (e.g. Return On Equity) or cost ratios (e.g. Cost/Income). Instead the event studies analyse market reaction to the deals, by computing the abnormal performances of the acquiring and/or the target firms' stock returns in the period when it is supposed the information reached the market.

A comprehensive review of studies following the FP approach is that proposed by Amel et al. (2004), who find common results for north-American and European deals, both showing little but present gain in efficiency *(endnote 1)*. Through analysing a sample of European mergers in the banking sector, Cavallo and Rossi (2001) find, conversely from previous studies, the existence of significant economies of scale and scope. This result is confirmed by Campa and Hernando (2006).

The literature of event studies, in particular those focusing on the American banking sector (Amel et al., 2004, and Rhoades, 1994) *(endnote 2)*, find that M&A deals are able to generate value. Moreover, distinguishing bidding from target banks, the literature indicates that, on average, there are wealth benefits for target's shareholders but often this is not true of the bidders' ones. Cybo-Ottone and Murgia (2000), in a similar setting to the present paper, analyse 54 deals between European publicly listed banks during 1988-1997. Their results are more conclusive than previous studies, showing an overall significant increase of the market value of the banks involved in these deals.

Campa and Hernando (2006), analysing European M&As in the financial industry, and Beitel et al. (2004), analysing European banks in particular, find results which are more aligned with the US results and with those of other sectors, consisting in positive returns only for target banks, and a slightly positive value creation overall which is of little significance in economic terms.

Previous studies on the Italian market have obtained ambiguous results. Among the studies following the FP approach, Comana (1995) does not find any clear efficiency improvement after M&As in the banking sector, while Resti (1997) and Resti and Siciliano (1999) observe positive performances only in the short-term. Pesic (2003), instead, like Rhoades (1998) for the US market, finds positive gains in

efficiency only in the long-term. Finally, Focarelli et al. (2002) show that target banks are usually less efficient than the acquirers.

Amongst the few event studies conducted on the Italian market, Ferretti (2000) finds a negative market reaction for bidders, while Resti and Siciliano (1999) find significant gains for the target banks. Savona (2002) shows that the loss for bidders after the announcement date only counterbalances the gains from speculative trading before the announcement date. This last result introduces our paper, in that it stresses the point that, in opaque markets like the Italian one, the announcement date could be far after the moment of the first market reaction to the new information.

Despite the heterogeneity of results, all the mentioned event studies have one thing in common: they always choose as their event date the announcement date of the deal which we will show to be misleading.

3. Sample and Methodology

3.1. The Sample

M&A activity in the Italian banking industry was relatively intense in the period 1994-2007. On average there were 36.4 deals per year, of which approximately 7 cases where either the bidder or the target were listed on the stock market and in 1.9 cases both banks were listed on the market (Table 1). As a matter of fact, the number of operations between listed banks is quite small yet highly informative as it is possible to rely entirely on market data, rather than on one-side only or accounting data as other studies do.

Insert Table 1 about here

Our analysis is focused on mergers and acquisitions between banks listed on the Italian Stock Exchange (ISE) during the period 1994-2008 *(endnote 3)*. Overall, we examined 38 deals where both banks were traded on the market. We also include in our final sample 10 operations that subsequently failed, in contrast with a previous announcement. The small size of our dataset is due to the condition that both the buyer and the target bank of each operation are listed. However the sample dimension is in line with other research which impose the same condition (Cybo-Ottone and Murgia, 2000, used a sample of 54 deals from across Europe) and has the benefit of being concentrated in a single country.

The period under study is particularly interesting because of two considerations: firstly, starting from 1994-1995, all main stocks on the ISE were continuously traded with a sufficiently liquid market and secondly, during the same period, M&A activity in Italy grew considerably.

Descriptive data and statistics of our dataset are reported in Table 2, along with an anticipation of our results.

Insert Table 2 about here

3.2 Methodology

The analysis undertaken was in the form of a classic event study. Although consolidated, the methodology calls for many decisions, which are somehow subjective or related to the type of data a researcher is dealing with. We decided to compare the results obtained from different methodologies, in order to analyse the sensibility of the output to the type of analysis, and then the importance of the methodology itself.

Firstly we attempted four different ways of computing the *abnormal returns* (AR), by correcting the actual returns alternatively with: 1) the market return; 2) the banking sector index return; 3) the market model expected return with market beta; 4) the market model expected return with banking sector beta.

In formulae the abnormal return of every bank *j* on day *t* is:

$$AR_{j,t} = R_{j,t} - R_{M,t}; \quad [1]$$

$$AR_{j,t} = R_{j,t} - R_{S,t} \quad [2]$$

$$AR_{j,t} = R_{j,t} - (\alpha_j + \beta_j R_{M,t}); \quad [3]$$

$$AR_{j,t} = R_{j,t} - (\alpha_j + \beta_j R_{S,t}); \quad [4]$$

where the subscripts M and S stand respectively for the market and the sector index, while α and β stand for the estimated parameters of the market model that are estimated in a window of [-150, -30] days with respect to *t(0)* (as defined below).

The choice of the method depends on the specific data one deals with. For instance, option [1] is usually considered as better for short event windows, where no clear trend in the market model is found, while option [3] is preferred for larger event windows. The choice of options [2] and [4], that of replacing the market index with the sector one, leads to a more appropriate measure of the AR. However it should be noted that in a thin market the sector index itself could be influenced by the abnormal returns of the firms involved in the deals.

Brown and Warner (1980) have shown that the sensitivity of results to the estimation method is quite low and our data basically supports the same conclusion. In view of these considerations, we

preferred to focus on the choice of the event date (but also that of the event window), which ended up being more relevant. Most of the event studies on M&A choose the operation's official announcement as the event date (see, among others, Cybo-Ottone and Murgia, 2000, Baradwaj et al., 1990, Allen and Cebenoyan, 1991, Hawawini and Swary, 1990, Ferretti, 2000), while a minority chooses the date of final regulation and consequent transfer of the majority stake, i.e. somehow the final outcome of the operation itself (Cornett and De, 1991, Hawawini and Swary, 1990, Resti and Siciliano, 1999). While we can presume that the results may be different with either choice, it is probably more important to stress that the market usually begins to react before the announcement of a deal and namely in the presence of rumours related to the fact. Obviously, the less insider trading regulations are enforced, the higher the relevance of the rumours' effect.

Our main contribution to the literature on M&A on the banking sector and also to the whole market is that of presenting what does change in the abnormal performances when we measure them with respect to the rumours' dates or in any case before the announcement date.

For every single operation in our dataset, we then searched the most important Italian financial newspaper, *Il Sole 24 Ore*, for leakages (rumours) relevant to our sample of deals.

We were able to determine three event dates for each operation in our sample:

t(0) = the day of the first rumours (information leakages): this date represents the day before that of the first news to appear in the newspaper reporting a possible operation between the bidder and the target that effectively precedes a later announcement on the rumoured operation.

t(1) = the announcement day: the date of the news of the official decision announcement by the buyer (or by both banks in the case of a friendly takeover);

t(2) = the day when the final outcome is made official: the date in which the controlling stake changes hands or it is otherwise certain that the operation will not occur.

In our opinion, the choice of using all three event dates responds to the need to understand the actual abnormal performance being measured: the results relative to *t(1)*, as has been noted, is probably only a fraction of the total market reaction, that began after *t(0)*; or the abnormal returns after *t(2)* could actually even represent a correction after an overreaction caused by the announcement.

Using different event dates will then allow us to better understand whether previous research has taken into consideration the full extent of market reaction or simply a part of it (and which aspect).

Table 2 shows how drastically the analysed period can change by choosing different event dates. On average, in fact, the largest window generally used in event studies (i.e. [t-30; t+30]) would not even include, choosing *t(1)* as the event date, the rumour date *t(0)*; the same is true of t(2) and t(1). The point is that the choice of different event dates can lead to different results, at least partially as they are related to substantially different time periods.

Table 2 also shows the data for various characteristics of the banks and the operations in our sample. The variables taken into consideration are: the size, the transfer of the controlling stake inside or outside the public market, the final outcome (success or failure) and the period of the operations (pre/post Tuif 1998, a change in regulations which increased the protection of minority shareholders in the case of takeovers) *(endnote 4)*. Subsequently we were also able to identify the subsample of operations that took place starting with the *moral suasion* of the supervisory authority. We have included in our study, purely in the ambit of a general comparison, a subsample of NV-shares, both of buyer and target banks, thereby adding 14 stocks to our dataset. This allows us to further our understanding of the performance of outsiders, which NV shareholders are by definition, and whose shares' price suffer the most by the presence of private benefits.

We then measured the overall success of an M&A deal by computing a weighted average of the ARs of the bidder's and target's stocks:

$$AR_{(ij),t} = \frac{MV_i \times AR_{i,t} + MV_j \times AR_{j,t}}{MV_i + MV_j} \quad [5]$$

where the weights used are the market capitalisations (MV) of bidder and target in *t(0)-30*.

Finally, we calculated the cumulative abnormal returns (CAR), as standard procedure, summing ARs in the desired windows.

4. Empirical analysis and results

This section deals with the questions outlined regarding the rumours' market effect, the value creation or private benefit drivers for M&A operations and the analysis of how the characteristics of the operations help to explain the heterogeneity of results.

4.1. Time Series Analysis Of The Market Reaction

The overall average results in our sample are to be found in Table 2, cumulating the equation [5] in the window [*t(1)*-30, *t(1)*] for every single operation. On examining the results, it is evident that no value is generated being the overall CAR equal to -0.25%, a

value which is statistically and economically insignificant. Moreover, as will be demonstrated, when different event windows are checked, and more importantly different event dates, it seems more likely that the market believes in small value destruction rather than creation.

As previously noted, the results of using different methodologies were compared *(endnote 5)*, in order to see if and how they affect the results. As expected, the results indicate that different methodologies do not substantially affect the CARs: they remain fundamentally unchanged in sign and often in magnitude as well.

Before further analysing the CARs, it is interesting to see graphically (see Figure 1) how these behave on average starting from *t(1)*-30 in a 90 days window, differentiating between acquiring and acquired banks.

Insert Figure 1 about here

Examining the first period considered (say from *t(1)*-30 to *t(1)*+30), it is evident that the performances of acquiring and acquired banks are quite different: while the first ones present CARs close to zero and perhaps even negative, the acquired banks show positive and apparently significant CARs.

Moreover, these CARs are almost entirely observable before the announcement day of the operations, *t(1)*, and they remain more or less the same in the 30 days after that. This result is in line with what we saw in the previous paragraph, which is that the announcement date is systematically delayed with respect to the date of the first rumours: if we want to acquire the full 'announcement effect' of an M&A on the market, the period preceding the announcement itself should also be analysed. All previous studies, in fact, lean in this direction, using event windows starting before *t(1)*. However, what was outlined in the previous paragraph is that often even the window *t(1)*-30 is not large enough to include *t(0)* and is therefore unable to fully capture the market reaction to the rumours, which are particularly important in somewhat opaque markets like the Italian one. Observing the behaviour of the CARs after the window [*t(1)*-30, *t(1)*+30], we see that the performance of the target banks deteriorates. This occurs because, after the target shareholders have cashed in the controlling premium, the stocks' value bounces back to its pre-bid level, and subsequently even further below this level.

A second aspect that we are keen to investigate is the different effects that M&A operations can have on the voting and the non voting shares. Therefore Figure 2 presents the CARs, as in Figure 1, but here with reference to the NV-shares, again differentiating between acquiring and acquired banks.

What is immediately clear is that the results on average are worse than those which refer to the voting shares, particularly for the targets. This is probably due to the fact that the NV-shares are often excluded from public offerings on the voting shares. This seems to indicate that, apart for the control premium, M&As do not seem to create value for outsiders. However, given that our sample is of only 14 stocks, we are limited in our analysis of this issue.

Insert Figure 2 about here

Going back to the examination of the voting shares, in Table 3 the CARs are reported, once again differentiating by acquiring and acquired banks, for different event dates and event windows. The results are reported in three panels: rumours, announcement, final outcome.

Insert Table 3 about here

Looking at the results with respect to the announcement date, *t(1)*, that is the event date used by most of the previous empirical research, it may be noted that, as observed when qualitatively examining Figure 1, the CARs are often significantly different from zero before the event date, while the sign depends on what angle is chosen: the bidders or the targets, the pre- or the post-event period.

Therefore it seems that a common conclusion in the literature has been confirmed: on average acquiring banks obtain negative performances, whereas target banks obtain positive ones. Moreover, it is possible to note that these results are often more evident when the event window is longer, showing how difficult it is to correctly determine the moment in which the market reacts to the new information (a moment that usually occurs well before the announcement day).

It is more difficult to determine the overall effect of the M&A, which appears to be negative however not statistically significant. Nonetheless, the results could be misleading in a market that anticipates the announcement: as a matter of fact, the targets' pre-event (announcement) CARs are positive and statistically significant, whereas post-event ones are actually negative (even if not statistically significant).

The last result is not true of the bidders, whose CARs are negative both before and after the announcement date; this seems to indicate that the market receives the information asymmetrically on targets and bidders, in particular identifying first the targets and then the bidders of a deal.

As a consequence, we could also interpret the negative reaction of the targets after the announcement as an effect of 'selling on the news' by

insiders who predict the deal.

Perhaps the most important result to be observed in Table 3 is that similar results are obtained, and which are often significant, if we use *t(0)* as the event date, thereby calculating the CARs in relation to the day of the first rumours regarding the operation. Again in this case, the acquiring banks lose market value while the target ones gain; moreover, the overall effect remains slightly negative. The main point here is that these results often refer to a period that precedes [*t(1)-30*] *(endnote 6)*, and therefore is another component of the market reaction that (at least partially) adds to that observed in *t(1)*.

Analysing the evolution of the market reaction around *t(0)*, we can once again observe that there is an anticipation with respect to the event date, even if smaller than that one before *t(1)*. Also the asymmetric reaction of bidders and targets is somewhat confirmed in *t(0)*.

With respect to both *t(0)* and *t(1)* the VW CARs show similar overall performances, indicating that the results hold in general for both small and large banks.

To sum up, we must conclude that the market reaction of an M&A is not easily observable because it is reflected in prices in different moments in time. Nevertheless, an important result has been uncovered: previous studies may not have captured the overall effect and instead simply a portion of the market reaction. In countries with more opaque markets the date chosen was probably not the most effective one.

Other studies outlined the difficulty in understanding the overall market reaction in event studies on M&As. Bhagat et al. (2005) showed that the visible market reaction is simply a fraction of the whole while Becher et al (2009) proved that in some cases the event window must be shifted far before the announcement date to better acquire the market reaction itself. A last group of results offered in Table 3 are related to the choice of using *t(2)* as an event date, that is the day the final outcome of the deal becomes clear. In this case, the acquiring banks and in particular the acquired ones register more negative CARs, especially after *t(2)*.

This result is consistent with what has been previously stated, in that the acquired banks register positive CARs as long as the shareholders still have to cash in the controlling premium included in the bid, whereas after the premium has been paid *(endnote 7)* the shares of the target reflect the market price without taking into consideration the vote segment *(endnote 8)*. Value Weighted data was calculated and reported in Table 3 mainly in order to control for possible outliers coming from small operations; in this regard, we can conclude that there are not substantial differences between the two types of CARs, and that the comment can be applied more or less in the same manner.

The same analysis, related only to the NV-shares (not reported but available) shows that they perform systematically poorer than the voting ones, both overall and differentiating between bidder and target banks. Given that the value of NV-shares is a good indicator of the market judgement in M&As, because they do not incorporate the voting premium, neither before nor after the operation, these results confirm comments regarding Figure 2, i.e. that the market does not really believe in value creation in M&As (at least in our sample).

4.2. Cross-Section Analysis of The Market Reaction

Given the variability of the results within our sample, such as the presence of acquired banks with negative CARs and those of acquiring banks with positive CARs, it is helpful to conclude our analysis by investigating the determinants of the cross-sectional variability.

Table 4 illustrates the average CARs of the banks in our sample divided into several subsamples. We present both VW CARs and Median CARs as two alternatives methods to control for outliers. In this table, we chose to show the CARs in the window [*t(1)*-30, 0], which appeared to be able to capture a significant share of the market reaction, which we have shown systematically anticipates the announcement of the deals.

First of all, as has been demonstrated more than once so far, the difference between acquiring and acquired banks is evident, where the first ones register on average negative CARs, while the second ones show, on average, positive CARs. The difference between the means in the two subsamples is statistically different from zero, and the same is true for the medians; this difference is also economically significant and confirmed by the Value Weighted CARs. The subsample of operations with the intervention of the Bank of Italy does not seem to show a positive effect of the Central Bank intervention itself, and it is actually possible to observe a negative effect, particularly when related to small banks (as can be deduced from the VW CARs, showing an effect not as negative as that of normal CARs); a possible explanation, beyond the Bank of Italy's ability to choose the right partners for banks, could be the fact that the Central Bank more likely intervenes when the target bank is in distress, then releasing a strong signal that affects the market valuation on the deal *(endnote 9)*.

Insert Table 4 about here

Regarding operations concluded with the transfer of the majority stake inside or outside of the market, we can see that the latter registered positive CARs. However, we need to verify that this result is what it

appears to be, that is that the acquiring banks are gaining at the targets' expense when the deal takes place outside the market. This will be covered in the following section by differentiating between buyers and targets banks.

The subsamples Pre/Post Tuif do appear to register poorer performances after the introduction of Tuif (especially in the case of small banks, given that the results are otherwise not significant when we look at value weighted CARs), but to understand if this is an effect of the Tuif itself we should again break down the analysis for bidders and targets (see below). When we then look at successful and failed operations, we can observe slightly better results for the latter ones; a possible explanation here is that the failed operations were perhaps those *ex-ante* judged unlikely, and which therefore created more reaction when announced. On examination of the subsamples of small/large scale banks, one notices that the results tend to be slightly in favour of the large ones (median and VW CARs), while the smaller the targets' are in relation to the acquirers' size, the higher the returns. Once again, it will be interesting to see if and how these results will change if we differentiate between acquiring and acquired banks - this, as we will see in Table 5, will display which acquiring bank spends its money best, and which acquired bank possesses more potential to create value. A clear result is that acquisitions are deals which create value, whereas the opposite is true for mergers; this result is in line with previous literature published on this subject (Jensen and Ruback, 1983, and Berkovitch and Narayanan, 1993, even if not specifically referring to the banking sector) and demonstrate the following: firms buying with cash spend their money better, while banks paying in stocks (the case of mergers) appear to be striving to protect themselves against the risk of a misevaluation by sharing the potential loss with the targets' shareholders.

Table 5 offers the possibility to further the analysis with respect to Table 4. The afore-mentioned subsamples are analysed whilst simultaneously differentiating between acquiring and acquired banks. As Cybo-Ottone and Murgia (2000), we use two dummies at the same time for every single regression: one for the acquiring/acquired bank, and the second representing one at the time the subsamples were proposed in Table 4. In all the regressions of Table 5 it is clear that the acquired banks register better performances than the acquiring ones (as has been stated previously), significant both in statistical and economical terms (the buyer/target dummy captures more than 8% of the difference in performances).

Beyond this general statement, it is possible to see the effects of the single subsamples, beginning with the operations in which the Bank of Italy intervened: in this case it seems that, even after having checked for the buyer/target variable, the effect has been negative on market returns, even if not statistically significant.

Insert Table 5 about here

Regarding subsamples of deals which occur within or outside the market, the results mirror and confirm those already noted, as is the case for positive/negative outcomes indicating that both the target and the bidder seem to benefit from the withdrawal of a deal. In the case of merger/acquisition operations, however, the results strongly confirm that only acquisitions create value. In this case, the result is statistically significant and an additional regression run on separate samples (not reported) shows that the bidders are those who gain the most in acquisitions when compared to mergers.

As for the dummy 'Post Tuif', we observe that the operations after the introduction of a regulation protecting minority shareholders seem to register poorer performances, economically (5.3%) which are nevertheless not statistically significant. We can conclude that net of the controlling premium paid (captured by the buyer/target dummy), the buyer loses more value than before the introduction of the Tuif. Therefore the new regulation is more favourable to outsiders, because the bidder is also forced to pay a bidding premium to them (confirming Hagendorff et al., 2008). The dummy 'size' seems to show that, after checking differences between the bidder and target banks, large banks are more likely to create value, however small. Nonetheless, if we consider the relative target size, we see that the larger the acquired bank then the lower the value creation which indicates that target efficiency may be improved where the acquired bank is small (Focarelli et al., 2002).

5 Conclusions

In this paper we analysed the market valuation of M&A deals in Italy in the ten year period 1994-2008. The limitations of the small sample size (76 banks), a feature shared with similar studies, have been partially counterbalanced by the proposed further analysis in time series.

The most important result of our study is that the choice of the event date is important in determining the results to be measured. We showed that the event windows used by previous studies do not even include, in many cases, the rumour date. Moreover this paper has presented the results obtained using the rumour date which are qualitatively the same as, with regards to both the bidders and the targets individually, those using the announcement date, yet they both reinforce each other as they are often referred to non-overlapping event windows. Our claim is that if only one event date is used, the

analysis inevitably becomes partial.

Considering the results further, it can be noted, using the announcement date as most of previous studies, the M&As show an overall small, in certain cases statistically significant, value destruction. Moreover, confirming a frequent result in the literature of M&As, it has been demonstrated that the target banks register a clear positive performance, while the acquiring banks appear to register a negative performance; this result shows that there is a redistribution of value between acquiring banks and shareholders of the acquired banks. We can conclude that by using different event dates, we are able to include different components of the market reaction regarding the same information yet in different moments in time.

Finally, the analysis was broken down into subsamples to provide additional results, the most important of which are the following: the Central Bank's intervention seems to have a negative impact on the market; the operations 'outside' of the market registered positive CARs (indicating that in this case the bidders gain at the targets' outsiders expense); the failed operations ended up with better results than those that actually occurred. To conclude, where differentiating between mergers and acquisitions, we observed that on average the latter create value, while the former do not; this is a result which has appeared frequently in previous literature on M&As, though it has not always been verified specifically for the banking sector.

References

1. Allen L, Cebenoyan A S. Bank Acquisitions and Ownership Structure: Theory and Evidence. Journal of Banking & Finance 1991; 15; 425-448.
2. Amel D, Barnes C, Panetta F, Salleo C. Consolidation and efficiency in the financial sector: A review of the international evidence. Journal of Banking and Finance 2004; 28; 2493-2519.
3. Asquith P. Merger Bids, Uncertainty, and Stockholder Returns. Journal of Financial Economics 1983; 11; 51-83.
4. Banca d'Italia. Annual Reports; Roma; various years.
5. Banca d'Italia. Bollettino di vigilanza; Roma; various years.
6. Baradwaj B G, Fraser D R, Furtado P H. Hostile Bank Takeover Offers: Analisys and Implications. Journal of Banking and Finance 1990; 4; 1229-1242.
7. Becher, David A., Bidder returns and merger anticipation: Evidence from banking deregulation. Journal of Corporate Finance 2009; 15; 85-98.
8. Beitel P, Schiereck D, Wahrenburg M. Explaining M&A Success in European Banks. European Financial Management 2004; 10; 109-139.
9. Berkovitch E, Narayanan P. Motives for Takeovers: an Empirical Investigation. The Journal of Financial and Quantitative Analysis 1993; 28; 347-362.
10. Bhagat S, Dong M, Hirshleifer D, Noah R. Do tender offers create value? New methods and evidence. Journal of Financial Economics 2005; 76; 3-60.
11. Boot A W A. Restructuring in the Banking Industry with Implications for Europe. EIB Papers 2003; 8; 109-129.
12. Bradley M, Desai A, Kim E H. Synergistic Gains from Corporate Acquisitions and Their Divisions between the Stockholders of Target and Acquiring Firms. Journal of Financial Economics 1988; 21; 3-40.
13. Brown S, Warner J. Measuring security price performance. Journal of Financial Economics 1980; 8; 205-258.
14. Campa J M, Hernando I. M&As performance in the European financial industry. Journal of Banking & Finance 2006; 30; 3367-3392.
15. Cavallo L, Rossi S P. Scale and scope economies in the European banking systems. Journal of Multinational Financial Management 2001; 11; 515-531.
16. Comana M. Crescita esterna e performance bancarie: analisi di 34 casi recenti. AssBank; Milano; 1995.
17. Cornett M, De S. Common stock returns in corporate takeover bids: Evidence from interstate bank mergers. Journal of Banking and Finance 1991; 15; 273-295.
18. Cybo-Ottone A, Murgia M. Mergers and shareholders wealth in European banking. Journal of Banking and Finance 2000; 24; 831-859.
19. Dick A, Zingales L. Private Benefits of Control: An International Comparison. Journal of Finance 2004; 59; 537-600.
20. Dodd P, Warner J. On Corporate Governance: A Study of Proxy Contests. Journal of Financial Economics 1983; 11; 401-439.
21. Ferretti R. Le acquisizioni bancarie e la reazione del mercato borsistico: le analisi in Usa, Europa e Italia. Bancaria 2000; 56; 26-33.
22. Focarelli D, Panetta F, Salleo C. Why Do Banks Merge?, Journal of Money, Credit and Banking 2002; 34; 1047-1066.
23. Gugler K, Mueller D C, Yurtoglu B, Zulehner C. The effects of mergers: an international comparison. International Journal of Industrial Organization 2003; 21; 625-653.
24. Hagendorff, J, Collins, M and Keasey, K. Investor protection and the value effects of bank merger announcements in Europe and the US, Journal of Banking and Finance 2008; 32; 1333-1348.
25. Hawawini G, Swary I. Mergers and Acquisitions in the U.S. Banking Industry. Evidence from the Capital Markets. North-Holland; Amsterdam; 1990.
26. Houston J F, Ryngaert M D. The overall gains from large mergers. Journal of Banking and Finance 1994; 18; 1155-1176.
27. Jensen M, Ruback R. The Market for Corporate Control: The Scientific Evidence. Journal of Financial Economics 1983; 11; 5-50.
28. Linciano N. The Effectiveness of Insider Trading Regulation in Italy. Evidence from Stock-Price Run-Ups Around Announcements of Corporate Control Transactions. European Journal of Law and Economics 2003; 16; 199-218.
29. Moeller S B, Schlingermann F P, Stulz R M. Firm size and the gains from acquisitions. Journal of Financial Economics 2004; 73; 201-228.

30. Nomisma. Acquisizioni fusioni concorrenza; Bologna; various years.
31. Pesic V. L'efficacia delle aggregazioni bancarie in Italia. Riflessioni ed evidenze empiriche. Banche e Banchieri 2003; 30; 517-544.
32. Resti A. Fusioni tra banche ed efficienza. I risultati di un'analisi empirica. Banche e Banchieri 1997; 24; 399-408.
33. Resti A, Siciliano G. Le acquisizioni di banche quotate creano valore per gli azionisti? Un confronto tra i prezzi di borsa ed i dati fondamentali di alcune banche italiane. Banca Impresa e Società 1999; 1; 93-124.
34. Rhoades S A. A summary of Merger Performance Studies in Banking, 1980-93, and an Assessment of the "Operating Performances" and "Event Study" Methodologies. Staff Studies from Board of Governors of the Federal Reserve System 1994; 167.
35. Rhoades S A. The efficiency effect of bank mergers: An overview of case studies of nine mergers. Journal of Banking and Finance 1998; 22; 273-291.
36. Savona R. Fusioni e acquisizioni bancarie in Italia, 1989-1997: un'analisi empirica sulla reattività dei prezzi azionari. Bancaria 2002; 1; 31-52.
37. Vander Vennet R. The effect of mergers and acquisition on the efficiency and profitability of EC credit institutions. Journal of Banking and Finance 1996; 20; 1531-1558.
38. Zingales L. The Value of the Voting Right: a Study of the Milan Stock Exchange Experience. The Review of Financial Studies 1994; 7; 125-148.

Appendices

Table 1. M&A operations between Italian banks in the period 1994-2008; the temporal classification has been based on the announcement date

YEAR	Number of Banks	Total n° of Deals	*Listed Banks*	
			At least one bank listed	Both banks listed
1994	994	52	3	1
1995	970	66	14	3
1996	937	56	3	0
1997	935	42	5	1
1998	921	50	6	2
1999	876	64	4	1
2000	841	57	8	3
2001	830	40	7	2
2002	814	30	10	4
2003	789	26	11	2
2004	778	17	8	1
2005	783	13	3	1
2006	793	12	9	5
2007	806	12	5	1
2008	799	9	7	1
TOTAL	-	546	103	28
Annual Average	857.7	36.4	6.9	1.9

Source: Bank of Italy, *Annual Reports*; Nomisma, *"Acquisizioni fusioni concorrenza"* - various editions; Zephyr database by Bureau van Dijk.

Table 2. Descriptive statistics of the dataset. A deal is defined public if there is a public offer to the targets' shareholders, otherwise private; a deal is defined as a merger if bidders' stocks are used as the principal method of payment; t(0), t(1) and t(2) are respectively the rumour date, the announcement date and the day the final outcome of the deal (failed or completed) becomes clear; Pre/Post Tuif refers to the period before/after the introduction of the new regulation (Tuif) protecting minority shareholders; With/Without the Supervisor's Intervention refers to the presence/absence of the Bank of Italy behind the deal.

	Mean	**Median**	**Std. Deviation**	**Min**	**Max**	**Positive / Negative**
Days from *t(1)* to *t(0)*	89.92	37	156.87	0	777	
Days from *t(2)* to *t(1)*	107.18	117	68.99	0	258	
Relative Target Size	52.29%	45.65%	39.80%	2.93%	165.17%	
Bidders' CARs in [t(1)-30,t(1)]	-2.47%	-1.87%	9.52%	-25.40%	18.56%	15 / 23
Targets' CARs in [t(1)-30,t(1)]	4.60%	4.32%	16.42%	-22.27%	83.47%	24 / 14
Deals' Overall VW CARs in [t(1)-30,t(1)]	-0.25%	0.07%	3.94%	-8.90%	8.31%	21 / 17
	0	**1**				
With (1) or without (0) Supervisor's Intervention	26	12				
Completed (0) / Failed (1)	28	10				
Public (1) / Private (0) deals	10	18				
Merger (0) / Acquisition (1)	10	18				
Pre (0) / Post (1) Tuif	9	29				

Table 3. Percentage CARs' Average (Simple and Value Weighted) of Voting Shares of the 76 banks of the sample, for different event windows. The methodology used to calculate the CARs is the market model with the market index. For the Value Weighted CARs, market capitalisations in the day before t(0)-30 are used as weights.

	Bidder Average CAR	Target Average CAR	Combined Average CAR	WINDOW	Bidder Average VW CAR	Target Average VW CAR	Combined Average VW CAR
Rumour Date Panel	-3.66% **	3.82% *	-1.86%	*t(0)*: [-30, 0]	-3.18% *	1.55%	-2.49% *
	-1.83%	4.27% ***	-0.50%	*t(0)*: [-15, 0]	-0.59%	2.60%	-0.05%
	-0.35%	3.63% ***	0.32%	*t(0)*: [-5, 0]	-0.75%	2.01%	-0.30%
	-0.18%	3.43% ***	0.45%	*t(0)*: [-3, 0]	-1.47% *	2.21% **	-0.63%
	-0.12%	1.90%	0.01%	*t(0)*: [0, 3]	-0.78%	2.20%	-0.03%
	-1.01%	1.28%	-0.44%	*t(0)*: [0, 5]	-0.97%	1.64%	-0.17%
	-0.94%	-0.79%	-0.68%	*t(0)*: [0, 15]	-0.65%	0.69%	-0.17%
	-2.34%	-0.95%	-1.12%	*t(0)*: [0, 30]	-0.52%	2.16%	0.08%
	-0.34%	4.43% **	0.17%	*t(0)*: [-3, 3]	-2.13%	3.77% *	-0.36%
	-1.40%	4.02% *	-0.32%	*t(0)*: [-5, 5]	-1.59%	3.01%	-0.25%
	-2.81% *	2.59%	-0.97%	*t(0)*: [-15, 15]	-1.12%	2.66%	-0.10%
	-6.05% ***	1.97%	-2.08% *	*t(0)*: [-30, 30]	-3.57%	3.07%	-1.04%
Announcement Date Panel	-3.02% **	5.15% *	-0.88%	*t(1)*: [-30, 0]	-2.07%	6.53% **	-0.42%
	-2.35% *	5.54% ***	-0.42%	*t(1)*: [-15, 0]	-2.40% *	6.11% ***	-0.63%
	-1.83% *	3.13% **	-0.82%	*t(1)*: [-5, 0]	-1.63%	2.71% *	-0.76%
	-0.84%	2.91% *	-0.05%	*t(1)*: [-3, 0]	-0.62%	1.29%	-0.31%
	-2.79% ***	-0.94%	-1.29% ***	*t(1)*: [0, 3]	-0.45%	-1.63%	-0.40%
	-2.65% **	-1.64%	-1.42% ***	*t(1)*: [0, 5]	-0.70%	-1.83%	-0.52%
	-0.80%	-0.42%	-0.58%	*t(1)*: [0, 15]	0.99%	-1.66%	0.18%
	-1.40%	-1.77%	-0.96%	*t(1)*: [0, 30]	0.30%	-2.20%	-0.17%
	-1.89%	1.23%	-0.68%	*t(1)*: [-3, 3]	-0.19%	0.21%	-0.05%
	-2.73% **	0.75%	-1.19% **	*t(1)*: [-5, 5]	-1.44%	1.44%	-0.39%
	-1.40%	4.38%	-0.14%	*t(1)*: [-15, 15]	-0.52%	5.00%	0.45%
	-2.67%	2.64%	-0.71%	*t(1)*: [-30, 30]	-0.88%	4.88%	0.29%
Final Outcome Date Panel	-0.60%	0.70%	-0.11%	*t(2)*: [-30, 0]	0.18%	-1.46%	-0.06%
	-0.14%	0.40%	0.08%	*t(2)*: [-15, 0]	0.40%	0.42%	0.19%
	-0.79%	-1.76% *	-1.02% *	*t(2)*: [-5, 0]	0.02%	-0.91%	-0.41%
	-0.10%	-1.01%	-0.35%	*t(2)*: [-3, 0]	0.72%	-0.01%	0.29%
	0.87%	-0.45%	0.35%	*t(2)*: [0, 3]	0.97%	-0.73%	0.30%
	0.10%	-1.27%	-0.05%	*t(2)*: [0, 5]	0.01%	-0.96%	-0.12%
	-0.43%	-2.65%	-0.48%	*t(2)*: [0, 15]	-1.19%	-2.47%	-0.81%
	-1.36%	-5.42% **	-1.14%	*t(2)*: [0, 30]	-3.77% **	-4.88% **	-2.17% ***
	0.96%	-1.04%	0.30%	*t(2)*: [-3, 3]	1.45%	-0.78%	0.48%
	-0.50%	-2.62%	-0.45%	*t(2)*: [-5, 5]	-0.21%	-1.91%	-0.34%
	-0.38%	-1.83%	-0.32%	*t(2)*: [-15, 15]	-1.04%	-2.09%	-0.70%
	-1.77%	-4.31%	-1.14%	*t(2)*: [-30, 30]	-3.83% **	-6.38% **	-2.39% ***

****, **, * Statistically significant at the 1%, 5%, 10% level, in a two-tailed t-test.*

Table 4. Percentage CARs from the Market Model with market index, in the window [t(1)-30, t(1)]. Three values are presented for CARs: the average, the value weighted average, and the median (in parenthesis).

Subsamples	CAR	VW CAR (Median)	Subsamples	CAR	VW CAR (Median)
Bidders	-3.02*	-3.12* (-2.46**)	Targets	5.15*	3.22* (4.37**)
With Bank of Italy	-1.19	-0.32 (-0.92)	Without Bank of Italy	1.98	0.20 (0.11)
In the Market	-0.2	0.08 (-0.27)	Outside of the Market	2.66	-0.25 (-0.77)
Pre Tuif	5.09**	1.13 (5.56**)	Post TUIF	-0.18**	-0.28 (-1.56**)
Small Size[1]	1.00	-0.28 (-0.38)	Big Size[1]	1.13%	0.38 (0.92)
Small Relative Target Size[1]	2.07	1.78 (0.23)	Big Relative Target Size[1]	0.06%	-1.68 (-0.09)
Mergers[2]	-1.12**	-0.55 (-2.11**)	Acquisitions[2]	4.81**	1.08 (3.67**)
Positive Outcome	0.4	0.01 (-0.27*)	Negative Outcome	3.23	0.17 (4.32*)

The tests on the difference in mean in each paired subsamples are reported both for CARs and for VW CARs and are two-tailed, while for the medians we applied a Wilcoxon's test.

****, **, * Statistically significant at the 1%, 5%, 10% level, in a two-tailed t-test.*

[1] *We define large in our sample as banks with a market capitalisation (absolute or relative to the bidder) at t(0)-30 equal or greater than the median.*

[2] *We define merger as a deal in which bidders' stocks are used as the principal method of payment.*

The same tests using CARs computed for various different windows, calculated with respect to both *t(0)* and *t(1)*, gave in the majority of cases similar results.

Table 5. Every raw represents the regression results of two dummies as independent variables to control both for each subsample and the Buyer/Target dummy. Dependent Variable is the CAR of Market Model with market index in the window [t(1)-30, t(1)].

Constant Coefficient	Dummy	Coefficient	DUMMY BUYER/TARGET COEFF.	Obs.
-0.030	-	-	0.082***	76
-0.021	Dummy Bank of Italy	-0.032	0.082***	76
-0.037	Dummy Outcome	0.028	0.082***	76
0.010	Dummy Tuif	-0.053	0.082***	76
-0.008	Dummy In/Out Market	-0.029	0.082***	56
-0.052**	Dummy Acquisition	0.059*	0.082***	56
-0.050*	Dummy Size	0.030	0.091***	76
-0.020	Dummy Relative Target Size	-0.020	0.082***	76

Dummy Buyer/Target: 1 = Target; Dummy Bank of Italy: 1 = With B.I.; Dummy Outcome: 1 = Negative; Dummy Tuif: 1 = After; Dummy In/Out Market: 1 = In; Dummy Merger or Acquisition: 1 = Merger; Dummy (Relative Target) Size: 1 = (Relative Target) Size higher than the median.

** = significant at a confidence interval of 10%; ** = 5%; *** = 1%.*

The same regressions using CARs computed for various different windows, calculated with respect to both *t(0)* and *t(1)*, gave in the majority of cases similar results.

Figure 1. Cumulated Abnormal Returns from the market model with market index, in the window [t(1)-30, t(1)+60].

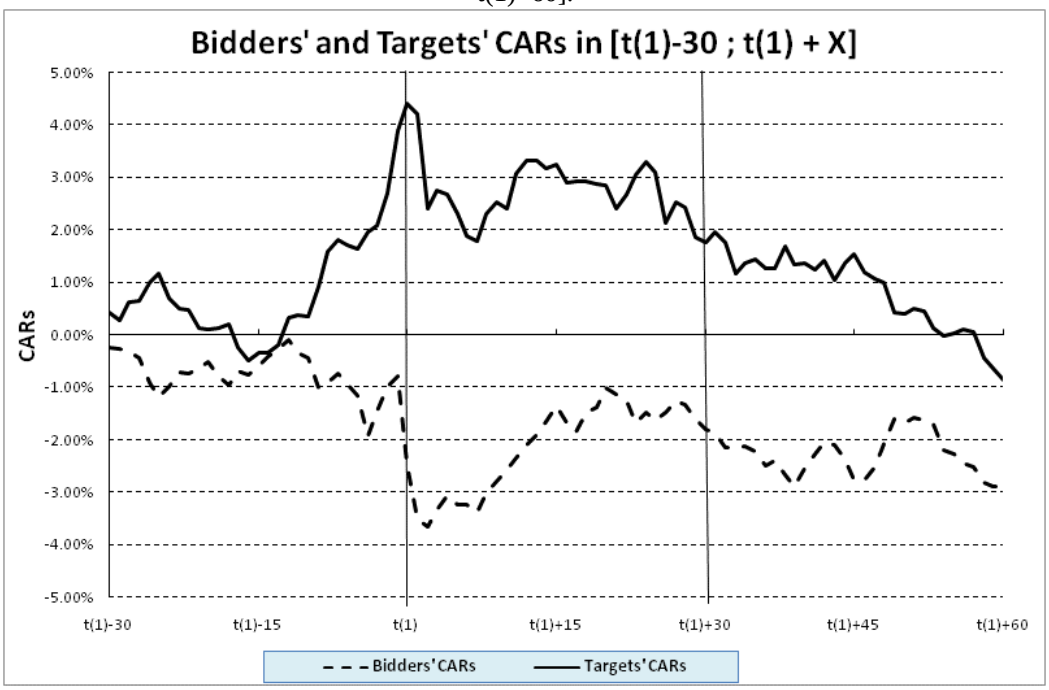
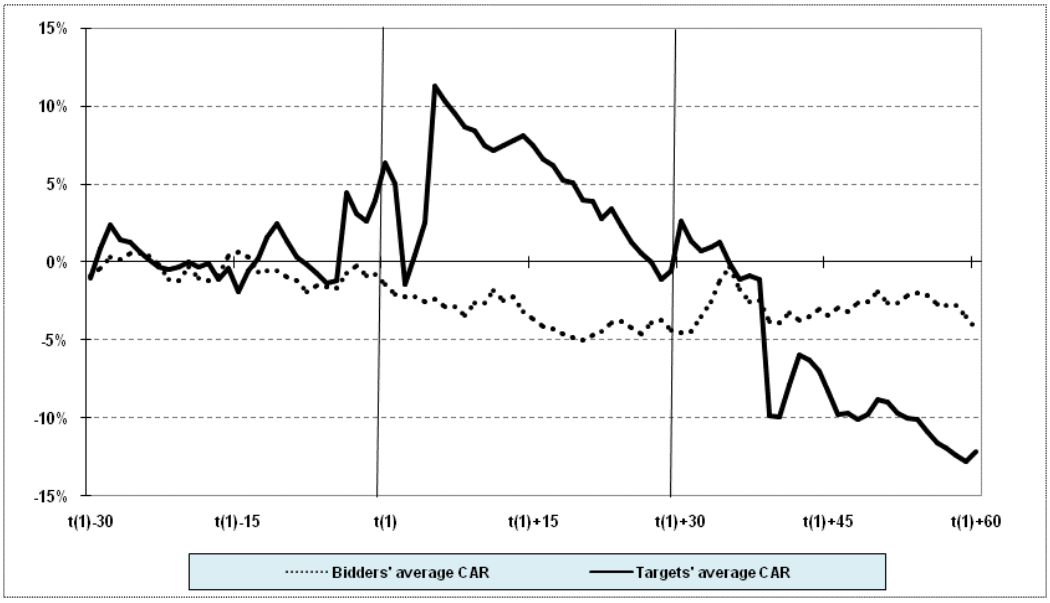


Figure 2. Cumulated Abnormal Returns from the market model with market index, of the Non-Voting shares in the window [t(1)-30, t(1)+60]



Notes:

[1]In particular, slightly higher gains were found in the European market, a result mainly driven by several mergers which occurred between banks within the domestic market and with similar sizes.

[2]These studies reach the same conclusions for the banking sector as those of other existing works referring instead to the overall market, see for example Bradley et al., 1988, Asquith, 1983 and Jensen and Ruback 1983.

[3]First semester.

[4]After the introduction of Tuif in 1998, whenever a raider's stake in another firm exceeds 30% of her capital, it is forced to launch a public offering for all the remaining target's shareholders.

[5]The results are not reported here but are available on request.

[6] Refer to Table 2 for statistics on the length between the rumor(s) and the announcement date.

[7]Or who is eligible to sell their stocks at a price including that premium has been identified, if in *t(2)* only the final payment remains.
[8]As explained by Zingales (1994).
[9]Another explanation could be based on the consideration that when the Bank of Italy intervenes in negotiations, agreements are more likely to be concluded outside of the market, implying that the controlling premium is not paid to outsiders.