VALUE CREATION IN EUROPEAN M&As (*)

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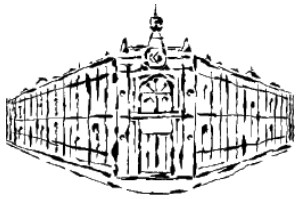

Banco de España

Banco de España — Servicio de Estudios
Documento de Trabajo n.º 0223

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October, 2002

(*) We would like to thank Jorge Martínez Pagés and seminar participants at the Banco de España for helpful comments and suggestions and Francisco Alonso, Francisco de Castro, María Oleaga and Isabel Paúl for research assistance.

Abstract

This paper looks at the value generated to shareholders by the announcement of mergers and acquisitions involving firms in the European Union over the period 1998-2000. Target firm shareholders receive on average a statistically significant excess return of 9% in a one-month window centered on the announcement date. Acquirers' excess returns are null on average. When distinguishing in terms of the geographical and sectoral dimensions of the merger deals, our main finding is that mergers in industries that had been previously under government control or that are still heavily regulated generate lower value than M&A announcements in unregulated industries. This low value creation in regulated industries becomes significantly negative when the merger involved two firms from different countries and was primarily due to the lower positive return that shareholders of the target firm enjoyed upon the announcement of the merger. This evidence is consistent with the existence of obstacles (such as cultural, legal, or transaction barriers) to the successful conclusion of this type of transaction, which decrease the probability that the merger will actually be completed as announced and, therefore, reduce its expected value.

JEL Classification: G34, G38, L44.

Keywords: mergers and acquisitions, European Union, event study.

I. INTRODUCTION

The introduction of the single currency in the European Union was perceived to be one of the key stepping stones towards the creation of a truly integrated single financial market in Europe. The deregulation of national markets and promotion of their integration to move towards a single European market was one of the key goals set at the Lisbon Summit as a precondition to achieving world leadership by the European Union. The integration of the corporate sector and the alignment of corporate ownership and structures along patterns driven by the economic structure of an integrated Europe are key to the accomplishment of this objective. The industrial structure across Europe is characterized by having relatively small firms with their activity heavily concentrated within their national borders, especially when compared to the industrial structure of the United States, an economic union of approximately the same size as the European Union (see Midelfart-Knarvik *et al.*, 2000). Furthermore, the concentration of activity that has been taking place in Europe is still very driven by national boundaries.

The integration of the national economies, the increase in deregulation in a large number of economic sectors and the recent listing of a number of large European corporations previously controlled by national governments has decreased the cost of corporate acquisitions and transactions across European borders, thus facilitating the restructuring of the European corporate sector. In particular, the introduction of the euro should have decisively fostered this process, through two main mechanisms. Firstly, the introduction of the single currency, by contributing to the integration of national markets, increases the attractiveness of corporate restructuring both as a means of taking advantage of the potential opportunities stemming from increasing integration and as a device to protect national markets from a more competitive environment. Secondly, the implementation of EMU, by facilitating the integration of European financial markets, should make it easier to obtain the significant volumes of funds needed to finance M&A operations.

In fact, the volume of M&A activity in Europe did rise significantly in the latter part of the nineties. After nearly doubling in 1998 and 1999, the volume of European M&As peaked that year at USD 1.529 billion. European merger activity significantly declined over the next two years to a total value of USD 532 billion in 2001. However, this increase in merger and acquisition activity has been part of a worldwide increase in corporate restructuring and is not unique to the European Union. The share of world M&A activity involving at least one European firm has remained approximately constant throughout the last ten years at around 30%. Moreover, European merger activity has also remained heavily concentrated within national borders. Domestic mergers in Europe still account for the lion's share of merger activity, representing more than 50% of all transactions involving a European firm (see European Commission, 2001).

In this respect, the lack of a specific boost to cross-border M&A operations within the euro-zone might be taken as a clear indication that there are still a large number of legal, economic and cultural burdens that deter this activity. Among these barriers, those of a regulatory nature should not be overlooked. Takeover rules differ widely among member states. Corporate takeover pills and similar provisions to protect existing management are common. Governments also maintain substantial ultimate control over who owns certain large firms through their use of golden shares and many regulatory and antitrust provisions require them to approve large M&A transactions. Attempts to standardize and promote European-wide regulation on merger activity have proven a failure.[1]

The purpose of this paper is to analyse activity in the field of mergers and acquisitions involving European enterprises. We look at this issue by focusing on the extent that recent corporate acquisitions announced in the EU since the creation of the euro have resulted in a generation of shareholder value. Value creation for the shareholders of the target and acquiring firms is only a partial measure of the net social value generated by a corporate restructuring decision. Net social value includes other benefits such as increases in consumer welfare, or the net increase in the welfare of other stakeholders such as workers, suppliers and communities in which the firms operate. Focusing on shareholder returns however has the advantage of being easy to observe. More decisively, they also represent the best estimate at the time of the transaction of the expected present discounted value generated by the transaction.

The paper focuses on analysis of differences in the intensity of value creation in different types of transaction. For this purpose, mergers and acquisitions are classified using two alternative criteria: the geographical scope of the merger and the degree of government involvement in the industry in which the deal takes place. This emphasis arises from the observation that the presence of institutional and policy barriers to European-wide restructuring is more likely to occur among international deals taking place in sectors that are regulated or with a large involvement of state-owned enterprises. Of course, firms involved in international transactions face many other structural issues and probably even harder ones, such as cultural integration, labour mobility, and different deeply rooted business cultures. However, from a policy perspective, the analysis of the effects that government involvement and regulation have on the success of cross-border activity seems pre-eminent, and most of the proposed regulatory changes have been directed at these issues.

The rest of the paper is organized as follows. The next section provides a literature survey of the wide evidence on the impact that mergers and acquisitions have on

[1] Last year the European Commission withdrew its proposed directive on merger and acquisition activity in Europe. The main goals of this directive were to seek a common basis for some key terms, and a requirement that national rules should cover the basics of mandatory takeovers, with a particular focus on investor protection.

shareholder value creation. Section III describes the data that we use for our analysis and the methodology employed, and the descriptive information on excess returns from merger announcements. Section IV describes the main results and section V concludes.

II. SUMMARY OF THE LITERATURE

There is a wide literature on the implications of mergers and acquisitions and the market for corporate control for value creation. We provide here a brief and partial survey of this literature focusing on two specific aspects: the evidence accumulated through event studies on the returns to shareholders of the target and acquiring firm accruing around the merger announcement; and, the existing evidence suggesting what type of firm characteristics make it more likely that a particular merger will generate or destroy shareholder value. In this summary, we focus on those recent papers that analyze samples of mergers that have taken place during the last decade. A more extensive survey of this literature going back in time can be found in Jensen and Ruback (1983), Datta *et al.* (1992) and Bruner (2001).

II.1.EXCESS RETURNS TO TARGET FIRMS

Target firm shareholders enjoy returns that are on average significantly positive in almost all cases. The findings of 11 studies, summarized in panel A of Table 1, reveal returns that are material and significant, despite variations in time period, type of deal (merger vs. tender offer), observation period, and measure of excess returns. These findings are consistent with those reported in previous surveys of this literature: Jensen and Ruback (1983), Datta *et al.* (1992) and Bruner (2001). These surveys report average abnormal returns in the 20%-30% range. The studies reported in Table 1 also show large abnormal returns, although significantly smaller for more recent transactions. Most of the studies find that excess returns occur in the days following the announcement, and in increase in the event window does seem to marginally increase the amount and significance of excess returns. Interestingly, positive abnormal returns are also detected in the days previous to the announcement date, suggesting that the market anticipates information on the deals. Negative returns are only reported in two of the studies for windows smaller than ten days, while negative returns are also reported for windows prior to the event date.[2] In short, an M&A transaction delivers a premium return to target firm shareholders.

[2] Buysschaert *et al.* (2002) and Danbolt (2002).

II.2. RETURNS TO BUYER FIRMS

The pattern of findings about market-based returns to buyer firms' shareholders is less conclusive. The evidence is evenly distributed between studies that report negative excess returns and those that report zero and slightly positive excess returns. Panel B of Table 1 summarizes the findings of 13 studies. These studies have been divided between those that report negative returns to shareholders and those finding positive or zero excess returns:

Panel B1 of Table 1 lists 7 studies that report negative returns. The negative returns vary between less than one percent and five percent, with different windows, most of them including periods prior to the announcement date. These excess returns are in most cases also statistically significantly different from zero. Panel B2 of Table 1 enumerates 7 studies that report zero or positive returns to acquirers. These returns range from zero to seven percent and in most cases they are very small. In short, the findings are distributed rather evenly among studies showing value destruction and those showing value creation. Thus, we can conclude that on aggregate, abnormal (or market-adjusted) returns to buyer shareholders from M&A activity are essentially zero, or in other words, buyers essentially break even (i.e. that acquisitions tend to offer zero net present values, or equivalently, that investors earn their required return).

Most of the reported excess returns seem to accrue only around the announcement date. Studies that analyze long-term returns to shareholders of acquiring firms tend to find a significant negative excess returns to acquirers[3]. Studies that focus on the excess returns after the completion of the transaction also tend to find significant negative returns to acquirers. Caves (1989) infers that these findings are due to "second thoughts" by bidders' shareholders, and/or the release of new information about the deal. But interpretation of longer-run returns following the transaction is complicated by possibly confounding events that have nothing to do with the transaction.

Again, this summary of findings is consistent with previous surveys. Nevertheless, Bruner (2001) suggests that his review of the empirical literature shows a slight tendency for returns to decline over time. Returns appear to be higher (more positive) in the 1960s and 1970s than in the 1980s and 1990s, except for deals in technology and banking. In these industries returns to bidders increased in the 1990s.

[3] Gregory and McCorriston (2002), Faccio *et al.* (2002) and Mahendra and Forsyth (2002) report significant long-term negative excess returns to acquirers.

II.3. RETURNS TO BUYER AND TARGET FIRMS COMBINED

Findings of positive abnormal returns to the seller and breakeven returns to the buyer raise the question of the net economic gain from this event. Since typically the buyer is substantially larger than the target, it is important to take into account the size difference between the merging firms. Hence, a large percentage gain to the target shareholders could be more than offset by a small percentage loss to the buyer shareholders. A number of studies have examined this by forming a portfolio of the buyer and target firms and examining either their weighted average returns (weighted by the relative sizes of the two firms) or by examining the absolute dollar value of returns. In Table 2, we report the findings of 6 studies. Almost all of the studies report positive combined returns. Nevertheless, it is worth pointing out that the magnitude of the excess returns is relatively low and that Aktas *et al.* (2001), focusing on a sample of mergers conducted in the second half of the nineties, found that half of the deals were value destroying. Overall, the findings in Table 2 coincide with the previous evidence in the literature suggesting that M&As do result in a total increase in the combined shareholder value of the merging firms.

II.4 DRIVERS OF VALUE IN A MERGER

Three main value drivers have been highlighted by the literature in mergers: the existence of synergies, the importance of value investing, and the key role of management involvement.

Synergies through either the development of economies of scale, cost reduction, or the elimination of duplicated activities are almost always mentioned as the justification for a merger. Diversifying (unrelated) mergers tend to be associated with worse performance than related mergers. The degree of relatedness between the businesses of the buyer and seller is positively associated with returns.[4] There is also evidence that diversified firms trade at a discount relative to non-diversifying firms, although recent evidence suggests that this is not due to firms having diversified.[5] Maquieira *et al.* (1998) found negative, but insignificant, returns to buyers in conglomerate deals and positive and significant returns to buyers in non-conglomerate deals. Houston, James, and Ryngaert (2001) studied the association of forecasted cost savings with revenue enhancements in bank mergers and found a significant relationship between the present value of these benefits and the returns forecast on the announcement day.

[4] Comment and Jarrell (1995), Healy, Palepu and Ruback (1992 and 1997) among others provide evidence on the existence of value destruction from unrelated diversification.

[5] Lang and Stulz (1994) and Berger and Ofek (1995) provided the most comprehensive evidence on the existence of this diversification discount, while more recently Campa and Kedia (2002), Villalonga (2001), Maksimovic and Phillips (2002) provide results consistent with the existence of this discount even when firms are maximizing value.

Value investment is also likely to generate positive returns. Value investment occurs when buyers purchase apparently cheap firms (low book-to-market ratios). Rau and Vermaelen (1998) found that buyers of companies with high book-to-market value ratios obtain significantly negative excess returns in merger deals, while value-oriented buyers earn significantly positive abnormal returns. Sellers also prefer cash to stock in a merger. Evidence suggests that stock deals are related with negative value creation while cash purchasers have zero or positive excess returns.[6]

Finally, studies suggest that returns to buyer firm shareholders are positively related to share ownership by managers and employees. A related finding is that leverage and management buyouts (LBOs and MBOs) create value for buyers. The sources of these returns are not only from tax savings due to debt and depreciation shields. Gains also significantly accrue from efficiencies and greater operational improvements implemented after the buyout by the new managers who tend to have a significant portion of their net worth committed to the success of the transaction.[7]

Most of the previous literature has focused on the value drivers to an M&A announcement that are specific to the firms or the business involved. There has not been much analysis of the impact that the institutional context might have on the value that different type of transactions might generate. Our emphases in this paper is to identify whether systematic differences exist in the value generated by M&As in the European Union depending on the nationality of the firms involved and the characteristics of the industries in which they operate.

III.EXCESS RETURNS: DESCRIPTIVE STATISTICS

Excess returns from the announcement of an M&A event are calculated relative to the expected returns for windows of different length around the announcement date. The measure of excess return is calculated as the difference between the return to shareholders during the window, t, and the expected return to shareholders calculated on the basis of the CAPM model relative to each firm's domestic stock market, with a beta parameter estimated with a window of 150 days prior to the announcement date. We have calculated three different measures of excess returns: excess returns to the shareholders of the acquiring firm, excess returns to the shareholders of the target firm, and the total excess returns from the merger, which are the average of the excess returns to both firms weighted by their relative market capitalizations.

[6] Asquith, Bruner, and Mullins (1987), Huang and Walkling (1989), Travlos (1987), and Yook (2000).

[7] You *et al.* (1986) and Healy, Palepu and Ruback (1997).

We have also used different windows in our calculation of the excess return measures to check for the robustness of our results to the specified window. We have used windows of one week and one month, computed from the day prior to the announcement date. We have also used windows centered around the announcement date and with a radius of one week and one month to take into account potential market reactions, prior to the announcement date, if agents anticipate information on the deal. We have used a final sample of 288 M&A announcements over the period 1998-2000. Each merger in our sample satisfies the following selection criteria: a) both the target and acquiring companies are from EU countries; b) the merging companies are listed; and c) information on total return to shareholders is available both for target and acquirer. We have tested the robustness of the results by using a wider sample consisting of those mergers for which information on either the target or the acquirer is available (unmatched panel)[8].

Table 3 provides some information on the sample composition. The distribution of the sample across the EU member states is shown in panel A. Germany accounts for the largest proportion, followed at some distance by the UK, France and Italy. The proportion of mergers in which the target belongs to one of the five largest EU countries is around 70%. The corresponding figure for acquirers is slightly smaller. Comparing our sample with the total M&A population, proxied by the SDC M&A database (see European Commission, 2001), UK deals seem to be underrepresented in our sample. As shown in panel B, a majority of M&A deals in our sample took place in financial services and in manufacturing. When comparing with the total population, mergers in the service sector seem to be underrepresented. Over time, the composition of our sample reflects the important growth in the number of operations that have taken place in 1999 and 2000. Finally, the share of domestic mergers in our sample (69%) is higher than the corresponding share in the SDC M&A database (54%)[9].

Table 4 presents the cumulative excess returns for merging firms in our basic sample based on various windows around the announcement date. The table provides the bootstrapped skewness-adjusted t-statistic as well as 5% confidence bands computed following the method described in Lyon *et al.* (1999).[10]

Our results for the complete sample of mergers are consistent with those generally found in the event study literature analysing market-based returns to merging firms' shareholders around the announcement date. Thus, we find that there are positive and significant abnormal returns to targets ranging from nearly 3% over the period (t-1, t+28) to around 9% over the period (t-30, t+30). Around 60% of the target firms display positive

[8] See the Appendix for a detailed description of the sample selection process.

[9] The SDC M&A database is not only limited to transactions involving two companies from EU countries. Therefore, it includes a number of transactions in which one of the companies does not belong to a EU member state. This accounts for part of the difference in the proportion of cross-border transactions in the two datasets.

[10] The pattern of results does not significantly change when using the unmatched sample.

abnormal returns (see Table 5). However, on average for all mergers, there are no significant abnormal returns to acquiring firms. The share of acquiring firms displaying positive abnormal returns is very close to 50%. Overall, the increase in the net present value of acquiring companies around the merger announcement date is essentially zero (i.e. buyers earn their required return). Additionally, it is worth emphasizing that, both for targets and buyers, there is a broad range of responses to the announcement of a merger deal from very positive to very negative.

Figure 1 shows the distribution of excess returns to targets and acquirers for the different windows. The range of the distribution of returns increases with the size of the window. More interestingly, target returns are positively skewed while returns to acquirers are more symmetrically distributed. For instance, the 25th percentile of target returns over the window (t-1, t+5) is –2.0% and the 75th percentile is 5.9%. In contrast, for acquirers these percentile values are –2.6% and 2.1%, respectively.

Looking at excess returns over the different windows also provides insight on the timing in which excess returns are on average generated. Excess returns for targets are mostly found within the window (t-30, t+5). In fact, excess returns over the window (t-1, t+5) are even larger than (although very close to) those found over the larger window (t-1, t+28). In general, it seems that abnormal returns are generated mostly up to the first week after the announcement date and that there is significant information in the market in the month previous to the formal announcement date.

The question of the net economic gain from the announcement of an M&A deal can be addressed by examining a weighted average of the excess returns to target and buyer firms (weighted by their relative market values). For the whole sample of mergers, we find (see Table 5) that the joint excess returns range, depending on the window, from –0.4% to 0.9% and the percentage of mergers creating value (i.e. with positive joint abnormal returns) varies between 47% and 56%. Therefore, it seems that the positive excess returns to targets are to a large extent offset by the zero excess returns to buyers, given that the acquiring firms are usually substantially larger than targets.

National vs. cross-border mergers

One of the goals of the paper is to find out whether significant barriers exist to the restructuring of corporate activity within the European Union. As already highlighted in the introduction, the industrial structure of the EU is more concentrated within national borders than what a truly single market would suggest. This implies that as barriers to cross-border transactions decrease this type of transaction will occur more frequently. In the absence of these barriers, we should expect the announcement of a cross-border merger to involve, on average, a generation of value at least as large as a similar transaction involving two

domestic firms. To the extent that these barriers are high, we would expect the likelihood that a cross-border merger will generate value to decrease.

As a first step to ascertain to what extent the profitability of M&A activity differs depending on the national or cross-border nature of the transactions, this section presents some descriptive statistics on the excess returns enjoyed by the shareholders of the merging companies distinguishing between national and cross-border transactions. The evidence presented in Tables 4, 5 and 6 uniformly shows that average abnormal returns to targets and acquirers are larger in national mergers than in cross-border deals.

This difference in average returns ranges from 0.1% to 1.7% in the case of targets, but is not significant (see Table 6). The percentage of target firms displaying positive excess returns is slightly higher for the sub-sample of national mergers (see Table 5). Thus, we find that merger premia paid to target shareholders are larger (although non significantly) in national deals, suggesting that buyers in cross-border mergers might face obstacles of a different nature that offset their advantages when entering new markets, resulting in a lower premium being paid to target shareholders.

The difference between abnormal returns to acquirers in national mergers and abnormal returns to acquirers in cross-border mergers varies between 1.3% and 3.5% and is (or is close to) significant in most cases. On the one hand, abnormal returns to acquiring firms are positive and non-significant in national mergers. On the other hand, abnormal returns to acquiring firms are negative and weakly significant in cross-border mergers. Again, the percentage of acquiring firms displaying positive excess returns is slightly higher for the sub-sample of national mergers. Therefore, it seems that in spite of paying a smaller premium to target owners, shareholders of acquiring firms obtain lower benefits in cross-border deals than in national transactions.

Looking at the weighted average of the excess returns to target and buyer firms in national and cross-border deals, we find that there is a significant difference in the joint abnormal return that ranges, depending on the window, from 1.8% to 3.5%. More precisely, the average joint excess return is always positive for national mergers (depending on the window, it ranges from 0.2% to 1.9%) and always negative for cross-border deals (depending on the window, it ranges from -0.6% to -1.6%).

It is not surprising that target returns do not significantly differ between national and cross-border mergers. Acquirers need to make on average a sufficiently attractive offer for the existing shareholders to transfer their ownership. However, acquiring firms get heavily penalised for engaging in a cross-border merger. Not because they pay too much, but because the expected value of the proposed cross-border transaction is low.

Mergers in regulated industries vs. mergers in unregulated industries

We compare excess returns arising from merging processes taking into account the type of activity in which the target firm is engaged. More precisely we focus on the cases where the target firm operates in an industry that is regulated or has a large involvement of state-owned enterprises[11]. In general, we find that abnormal returns to targets and acquirers are smaller for mergers in regulated industries.

The difference between the excess return to targets in mergers in unregulated industries and the excess return to targets in mergers in regulated industries ranges from 1.2% to 5.8% and is significant in most cases (see Table 6). For mergers in unregulated industries, abnormal returns to targets are positive and significant whereas in the case of mergers in regulated industries they are positive although non-significant. Moreover, there is a difference of around 15 percentage points in the share of deals with positive excess returns to targets between deals in unregulated industries and those in regulated industries (see Table 5). Thus, we find that merger premia paid to target shareholders are smaller in mergers in regulated industries. In fact, the hypothesis of zero excess returns to targets, at short horizons, cannot be rejected for this type of industries. What these results might reflect is the existence of regulatory frameworks in certain industries that represent a hostile environment that hampers the success of the merger processes. In fact, as it is later argued these adverse conditions are more relevant to foreign buyers.

The difference between the excess return to acquirers in mergers in unregulated industries and the excess return to acquirers in mergers in regulated industries varies between –0.5% and 2.9% but it is never significant. Abnormal returns to acquirers are positive but not significant for mergers in unregulated industries whereas they are negative and non-significant for mergers in regulated industries.

The regulatory character of the industry also seems to be a relevant factor in terms of the process of value creation. More precisely, the average joint excess return is always positive for mergers in unregulated industries (depending on the window, it ranges from 0.1% to 2.0%) and always negative for deals in regulated industries (depending on the window, it ranges from -0.8% to -4.2%). In fact, around 60% of the deals in regulated industries generate negative joint excess returns. The difference in the excess returns between unregulated and regulated transactions is above 2.5% and statistically significant.

Size of the merging firms

In order to investigate the relationship between excess returns and the size of the merging firms, we have computed the average excess returns to targets, acquirers, and the weighted average of both, by quartiles of the size distribution (defined in terms of market capitalization and sales, respectively). We have not found a clear relationship between the size of the merging firms and the magnitude of the abnormal returns to these firms. If anything, mergers involving acquirers with the lowest level of market capitalization display the highest value of abnormal returns.

IV. REGRESSION ANALYSIS

Estimation Methodology:

We expect the value of excess returns to be correlated with the type of M&A event that is announced. Specifically we would like to test for the existence of systematic differences in two dimensions: whether the merger takes place between two firms in the same country or between firms from two different European countries; and, whether the target firm operates in an industry which had (or still has) a large percentage of its total activity controlled by state-owned enterprises or that is actively regulated. Additionally, we would also like to test whether the success of previous merger processes in the same sector helps to explain the degree of excess returns observed in our sample.

The basic model specification that we use is:

$$R_{i,j}^{t} = \alpha_j + a_1 DC_{i,j} + a_2 Ind_j + a_3 DC_{i,j} * Ind_j + \upsilon_{i,j}^{t}$$

where $R_{i,j}^{t}$ refers to the excess return during a window t from the announcement of a merger between the target firm j and the acquiring firm i; α_j is a country-specific intercept; $DC_{i,j}$ is a dummy that takes the value of 1 if firms i and j are from the same country and zero otherwise; and Ind_j is a dummy that takes the value of 1 if the industry of the target firm is an industry that is regulated or with a large involvement of state-owned enterprises.

[11] We consider mineral industries, primary metal industries, transportation, communication, electricity, gas, sanitary services and financial institutions as regulated industries: More precisely, these industries correspond to the following 2-digit SIC codes: 10, 13, 33, 40, 44-45, 48-49, 60-61, 80.

The following table summarises the tests on the existence of systematic differences in excess returns between national and cross-border mergers, on the one hand, and between mergers in regulated and in unregulated industries, on the other.

Tests on differences in excess returns	
H_0: $a_1+a_3=0$	No difference between excess returns in national and cross-border mergers, in mergers in regulated industries.
H_0: $a_1=0$	No difference between excess returns in national and cross-border mergers, in mergers in unregulated industries.
H_0: $a_2+a_3=0$	No difference between excess returns in mergers in regulated and mergers in unregulated industries, in national deals.
H_0: $a_2=0$	No difference between excess returns in mergers in regulated and mergers in unregulated industries, in cross-border deals.

We first distinguish between the excess returns to acquiring and target firms. Table 7 displays the results of the regression analysis of the excess returns to target and acquiring shareholders as well as for the weighted average of both excess returns. As was already observed in the descriptive statistics, excess returns for target firms are on average positive and returns are not significantly different between domestic and international mergers (irrespective of the regulatory character of the target industry). Target firms from regulated industries do show a significantly lower return than returns to mergers taking place in other industries. However, this distribution of excess returns is not uniform by nationality of the acquiring firm. When the target firm is acquired by a firm from a different country excess returns are significantly lower with a one-month centered negative excess return of –12%. On the other hand, when the acquiring firm is from the same country, shareholders of the target firm do not receive significantly different returns than shareholders from target firms in other industries.

We checked whether significant national differences existed among the excess returns to shareholders depending on the country of nationality of the target firm by allowing country-specific intercepts in equation (1). Differences in national regulations, approaches toward hostile takeover activities, and different degrees of government involvement in certain industries can lead to observed differences in the degree of excess return to be obtained from an acquisition. On average, there are no differences in excess return to target firms due to the country of nationality of the merger. A test of the joint hypothesis that all the country-specific intercepts α_j are equal in equation (1) could not be rejected.

In addition, we tested whether there are cross-country differences in the effects we are interested in. The only significant difference we found was in the coefficient of the dummy that indicates whether the target firm operates in a regulated industry. More precisely, we found that target firms from regulated industries display a significantly lower excess return than target firms in other industries only in the cases of France, Germany, Portugal, Spain, Ireland and Austria.

For shareholders of acquiring firms the results are quite different. The evidence shown in Table 7 suggests that acquirers' excess returns are significantly larger when the merging firms are from the same country. This effect however is both statistically and economically small, implying a 1% to 1.5% excess return for the acquirers' shareholders over a one-week or one-month window. In the case of the one-month centered window this effect is non-significant. Moreover, for those mergers where the target firm belongs to a regulated industry, there are no differences in excess returns between national and cross-border mergers. There also do not seem to be significant differences between excess returns for acquirers depending on the industry of the target firm.

This evidence suggests that an acquisition by a foreign company of a firm operating in a regulated industry gets heavily penalized by financial markets. One possibility is that these mergers destroy value for the overall acquisition, so that the total value created in these transactions is negative, or that the acquisition just relocates wealth from the target firm shareholders to the acquiring firm. We test for this possibility by looking at the total excess value created from the announcement of a merger. In general, the results displayed in Table 7 seem to suggest that merger processes in regulated industries tend to destroy value. This effect is particularly clear in the case of a foreign acquiring firm and when we use the widest window to compute the excess return measure.

In order to test whether there are differences in the effects of interest among countries with different financial systems and, more precisely, with different corporate governance structures, we focus on the behavior of the five largest EU countries testing whether the estimated parameters differ between the UK and the Continental economies. As a previous step, we repeated the estimation of the basic model restricting the sample to those mergers where the target firm belongs to one of the 5 largest EU countries. This sample represents around 70% of the total number of transactions in our sample. Basically, we observe that the main results found with the larger sample are confirmed. That is:

- When focusing on cross-border deals, target firms from regulated industries display a significantly lower return than those in other industries.

- As regards excess returns to acquiring firm shareholders, no systematic significant difference is found when distinguishing between national or cross-

border deals or when discriminating according to the regulatory character of the industry of the target firm.

- Mergers in regulated industries destroy value. This effect is significant when the acquirer is a foreign firm and we consider a one-month centered window.

These results are mostly driven by the effects found in mergers with a target from a country of Continental Europe, since mergers with a UK target represent slightly less than 20% of the sample (38 out of 202 observations). Thus, as shown in Table 8, the results for the 4 largest EU countries (excluding the UK) broadly reproduce those for the whole sample and those obtained for the sample of the 5 largest EU countries. However, the pattern of results for the sample of mergers with a UK target is significantly different. Overall, the results for this sub-sample are very imprecise given its small size. In the case of excess returns to acquirer shareholders we do not find any significant difference. For target shareholders, if anything, we find higher returns in national deals than in cross-border ones when focussing on mergers in regulated industries. The results for the joint excess returns display some significant coefficients. Nevertheless, these results are mostly driven by the reduced size of the sample of mergers with a UK target and, in particular, by the fact that within that sample there are only 2 cross-border deals in regulated industries with market capitalization data available. Thus, when we drop the interaction term from the regression, the rest of the coefficients significantly change.

Kleiner and Klodt (2002) have documented the existence of several merger waves throughout the last century, highlighting the fact that during these episodes M&A activities tend to cluster by industry. They argue that this sectoral clustering supports the hypothesis that sectoral shocks cause merger waves. More precisely, these shocks that affect the profitability of engaging in corporate restructuring are industry-specific and mostly related to technological innovations or regulatory changes. Therefore, we need to take into account that the existence of these shocks might be driving our reported results on the value creation of mergers in regulated industries.

To the extent that consolidation through merger activity was the optimal response to these sectoral shocks, we could expect merger activity to result in positive value creation in the industry. On the other hand, if mergers in the same industry destroy value this could be suggesting that there was an initial misperception of the potential benefits of a merger as a way of taking advantage of the changed (technological or regulatory) environment. In this respect, we would like to test whether the “success” of previous merger processes in the same sector helps to explain the degree of excess returns observed in our sample. For this purpose, we estimate our basic specification extended with a variable that tries to proxy this “success”. We consider two alternative proxies. MWE is the average of the joint excess returns (computed for a window centered around the announcement date with a radius of

one-month) of the mergers that have taken place in the European Union in the same industry in the previous six months. Analogously, MWN restricts the computation of the average joint excess returns to those mergers in which the target belongs to the same country.

The results of this test are reported in Table 9. In general, the estimates of the coefficients of the basic specification do not significantly differ from those shown in Table 7. As regards the estimates for the variables that measure the average excess returns in the same industry, these coefficients are always positive. In the case of the 1-month centered window this effect is always significant (except in the equation of target excess returns when using MWE). In the case of the 1-week non-centered window, the merger wave variables are significant in the equation of acquirer excess returns. To sum up these results, the degree of success of previous mergers in the same industry matters to explain the size of excess returns. This is especially the case for the excess returns to acquiring firm shareholders. The effect is more evident when we focus on the excess returns over a longer window and we use a merger wave variable that only takes into account those mergers that have taken place in the same country.

Moreover, we expect that the average excess returns of previous merger deals in the same industry affect the excess returns arising from a merger announcement only if these average excess returns are positive. If previous merger processes in the same industry have not been successful, we should not expect new merger announcements in the same industry unless the incentives for the merger are different from those in previous deals. In such a case, we should not expect any effect from average excess returns in previous mergers on the degree of success of a new merger deal. We have tested this idea by splitting MWN in two variables: MWN+ that is equal to MWN if MWN is positive and zero otherwise, and MWN- that is equal to MWN if MWN is negative and zero otherwise. We construct MWE+ and MWE- analogously. In the regression for acquirers' excess returns, we found the expected result: MWN+ (or MWE+) is positive and significant whereas MWN- (or MWE-) is not significant. However, the results are not as clear in the case of targets (i.e. MWN- or MWE- are significant in some cases).

V. CONCLUSIONS

The process of economic integration, the deregulation of economic activity in many sectors and the financial integration of national economies in the EU during the last decade have stimulated an important restructuring of companies operating in the European Union, and particularly in those countries that belong to the euro area. Nevertheless, this restructuring process was also part of a broader wave of mergers and acquisitions among corporations from industrial countries. As a result, the volume of M&A activity in the European Union did not differ significantly from the evolution of this activity in the US.

Although, it is true that the number of M&A transactions involving firms from the euro area increased at a faster rate during the period 1998-2000, most of this increase was due to domestic mergers that have increased the concentration of activity in certain sectors within national borders.

In this paper we have performed an analysis of shareholder value creation upon the announcement of M&As involving European Union firms. We find that target shareholders receive on average a positive and significant excess return from the announcement of the merger. Conversely, the mean excess return to shareholders of the acquiring firms is not significantly different from zero. In fact, returns to acquiring firms were negative in almost 55% of the transactions. These results are consistent with previous findings in the merger literature reporting zero and negative return to acquiring firms (Bruner, 2001).

The analysis provided here of shareholder value creation from M&A activity in Europe indicates that mergers in industries that had been previously under government control or operating in heavily regulated environments generate lower value than M&A announcements in unregulated industries. This low value creation in regulated industries becomes significantly negative when the merger involved two firms from different euro area countries and was primarily due to the lower positive return that shareholders of the target firm enjoyed upon the announcement of the merger. This evidence is consistent with the existence of obstacles to the successful conclusion of the merger -such as cultural, legal, or transaction barriers similar to those often emphasized in discussions about the creation of a truly integrated financial market in Europe (Lamfalussy *et al.*, 2001)- that decrease the probability that the merger will actually be completed as announced and, therefore, its expected value.

Table 1

Summary of Shareholder Return Studies for M&A

Panel A: Returns to the Target Firm Shareholders

Study	Cumulative Abnormal Returns (% or avg$/acq)	Sample Size	Sample Period	Event Window (days)	% Pos. Returns	Notes
Maquieira *et al.* (1998)	+41.65% conglomerate +38.08% non-congl.	47 55	1963-96	(-60,60)	61.8% 83.0%	Study of returns for conglomerate and non-conglomerate stock-for-stock mergers.
Mulherin and Boone (2000)	+21.2%	376	1990-1999	(-1,+1)	N/A	
Mulherin (2000)	+10.14%	202	1962-97	(-1,0)	76%	A sample of incomplete acquisitions.
DeLong (2001)	+16.61%	280	1988-95	(-10,1)	88.6%	Studied deals in which at least one party is a bank.
Houston et al. (2001)	+15.58% +24.60% +20.80%	27 37 64	1985-90 1991-96 1985-96	(-4,1)	N/A	Deals in which both parties are banks.
Martínez-Jerez (2002)	13,62%	335	1990-1998	(-1,1)	82%	pooling of interests versus purchases
Kuipers-Miller-Patel (2002)	35,83% 32,22% 3,60% 23,07%	181	1982-1991	AD-20 to ED+5 AD-5 to ED+5 AD-20 to AD-6 AD-1 to AD 0	N/A	AD first announc. date of any bid for US target and the announc. date of the acquirer's first bid for foreign acquirers ED corresponding effective date of the final bid for the target
Danbolt (2002)	-9,44% 2,41% 17,82% 20,23% -2,39% 9,04% -7,60% 9,06% 21,97% 31,03% 1,30% 22,44%	474 106 	1986-1991	(-8,-3) months (-2,-1) months (0,+1) months (-2,+1) months (+1,+5) months (-8,+5)months (-8,-3) months (-2,-1) months (0,+1) months (-2,+1) months (+1,+5) months (-8,+5)months	N/A	Domestic Acquisitions Cross-Border Acquisitions
P.Beitel-D.Schiereck-M.Wahrenburg (2002)	14,16% 12,31% 11,23% 11,38% 10,48% 8,27% 12,39% 13,54% 13,35% 14,39% 16%	98	1985-2000	(-20,0) (-10,0) (-5,0) (-2,0) (-1,0) 0 (-1,+1) (-2,+2) (-5,+5) (-10,+10) (-20+20)	72 73 68 74 70 64 71 75 71 76 75	Targets worldwide being acquired by European banks
Karceski, Ongena and Smith (2000)	8.48 -1.52	39	1983-1996	(-7,0) (+1,7)	N/A	Banks with commercial customers in Norway.
Buysschaert-Deloof-Jeggers (2002)	-0,9% 4,5% -2% -1,9% 1,4% -1,3%	4 upper 4 lower 4 upper 4 lower 11 11	1993-1996	(-30,+30) (-30,+30) (-5,+5) (-5,+5) (-30,+30) (-5,+5)	N/A	M&A within Corporate Groups Market –Adjusted models M&A between a holding company and a non-group buyer or seller

Notes:
Unless otherwise noted, event date is announcement date of merger/bid

Panel B: Returns to Acquiring Firm Shareholders

Panel B1: Studies Reporting Negative Returns to Acquirers

Study	Cumulative Abnormal Returns	Sample Size	Sample Period	Event Window (days)	% Pos. Returns	Notes
Mulherin and Boone (2000)	-0.37%	281	1990-1999	(-1,+1)	N/A	
Mitchell, Stafford (2000)	-0.14% [1] -0.07%	366	1961-1993	(-1,0)	N/A	Fama and French 3-Factor Model, applied to monthly returns
Walker (2000)	-0.84% [2] -0.77%	278	1980-1996	(-2,+2)	41.4% 46.4%	
DeLong (2001)	-1.68%	280	1988-95	(-10,1)	33.6%	Deals in which at least one party is a bank.
Houston *et al.* (2001)	-4.64% -2.61% -3.47%	27 37 64	1985-90 1991-96 1985-96	(-4,1)	N/A	Deals in which both parties are banks
Martínez-Jerez (2002)	-2,93%	335	1990-1998	(-1,1)	32%	
	-2,12% -2,14%	138 US target	1990-1998	AD-20 to ED+5 AD-5 to ED+5	N/A	AD first announc. date of any bid for US target and the announc. date of the acquirer's first bid for foreign acquirers.
	-1,32% -0,06% -0,92%	138 US target	1990-1998	AD-5 to AD+5 AD-20 to AD-6 AD-1 to AD 0		ED corresponding effective date of the final bid for the target
P.Beitel-D.Schiereck-M.Wahrenburg (2002)	-0,14% -0,01% -0,20%	98	1985-2000	0 (-1,+1) (-20+20)	46	Targets worldwide being acquired by European banks

Notes:
Unless otherwise noted, event date is announcement date of merger/bid
[1] Top return is based on an equal-weighted benchmark portfolio. Bottom-return is based on a value-weighted benchmark portfolio.
[2] Top return is a return adjusted for average market returns. Bottom return is adjusted for return on a matched firm.

Panel B2: Studies Reporting Zero or Positive Returns to Acquirers

Study	Cumulative Abnormal Returns	Sample Size	Sample Period	Event Window (days)	% Pos. Returns	Notes
Maquieira *et al.* (1998)	+6.14% non-conglomerate deals	55	1963-96	(-60,60)	61.8%	Study of returns in conglomerate and non-conglomerate stock-for-stock deals
	-4.79% conglomerate	47			36.2%	
Mulherin (2000)	+0.85%	161	1962-97	(-1,0)	49%	A sample of incomplete acquisitions.
Kohers and Kohers (2000)	1.37% cash deals 1.09% stock 1.26% whole sample	961 673 1634	1987-96	(0,1)	N/A	Sample of mergers among high-tech firms.
Raj and Forsyth (2001)	1,60% 0,75%	340	1994-98	(-15,+15)	N/A	Related sample Unrelated sample
Floreani and Rigamonti (2001)	3.65%	56	1996-2000	(-20,+2)	N/A	Insurance companies
P.Beitel-D.Schiereck-M.Wahrenburg (2002)	0,42% 0,14% 0,38% 0,07% 0,06% 0,18% 0,46% 0,24%	98	1985-2000	(-20,0) (-10,0) (-5,0) (-2,0) (-1,0) (-2,+2) (-5,+5) (-10,+10)	53 57 53 52 53 42 46 52	Targets worldwide being acquired by European banks
Buysschaert-Deloof-Jeggers (2002)	6,0% 1,7% 7,2% 5,9% 6,7% 1,8%	3 upper 4 lower 3 upper 4 lower 11 11	1993-1996	(-30,+30) (-30,+30) (-5,+5) (-5,+5) (-30,+30) (-5,+5)	N/A	M&As within Corporate Groups Market–Adjusted models M&As between a holding company and a non-group buyer or seller

Notes:
Unless otherwise noted, event date is announcement date of merger/bid

Table 2

Studies Reporting total Value Creation from an M&A
Combined returns to shareholders of acquiring firm and target firm

Study	Cumulative Abnormal Returns	Sample Size	Sample Period	Event Window (days)	% Pos. Returns	Notes
Mulherin, Boone (2000)	+3.56%	281	1990-1999	(-1, +1)	N/A	
Mulherin (2000)	+2.53%	116	1962-97	(-1,0)	66%	A sample of incomplete acquisitions.
Houston *et al.* (2001)	+0.14%	27	1985-90	(-4,1)	N/A	Deals in which both parties are banks.
	+3.11%	37	1991-96			
	+1.86%	64	1985-96			
Kuipers-Miller-Patel (2002)	5,03%	120	1982-1991	AD-20 to ED+5	N/A	AD first announc. date of any bid for US target and the announc.
	4,27%			AD-5 to ED+5		date of the acquirer's first bid for foreign acquirers.
	3,77%			AD-5 to AD+5		ED corresponding effective date of the final bid for the target
	0,75%			AD-20 to AD-6		
	2,99%			AD-1 to AD 0		
P.Beitel-D.Schiereck-M.Wahrenburg(2002)	2,01%	98	1985-2000	(-20,0)	63	Targets worldwide being acquired by European banks
	1,46%			(-10,0)	64	
	1,43%			(-5,0)	63	
	1,38%			(-2,0)	69	
	1,20%			(-1,0)	65	
	0,91%			0	55	
	1,40%			(-1,+1)	59	
	1,70%			(-2,+2)	62	
	1,45%			(-5,+5)	62	
	1,35%			(-10,+10)	64	
	1,29%			(-20+20)	58	
Nihat Aktas-Eric Bodt-Fany Declerck (2001)	0,05%	80	1995-1999	(-5,0)	37	Value creating business combinations N=37
	0,45%			(-4,0)		
	0,42%			(-3,0)		
	0,37%			(-2,0)		
	2,07%			(-1,0)		
	3,2%			0		
	4,41%			(0,+1)		
	5,89%			(0,+2)		
	5,52%			(0,+3)		
	5,65%			(0,+4)		
	5,73%			(0,+5)		
	-0,61%			(-5,0)		Value destroying business combinations N= 43
	-0,96%			(-4,0)		
	-1,10%			(-3,0)		
	-1,56%			(-2,0)		
	-1,56%			(-1,0)		
	-2,63%			0		
	-3,59%			(0,+1)		
	-4,38%			(0,+2)		
	-4,04%			(0,+3)		
	-4,29%			(0,+4)		
	-4,16%			(0,+5)		

Notes:
Unless otherwise noted, event date is announcement date of merger/bid

Table 3. Sample Composition

Distribution of the number of M&A announcements by country, industry, time, and number of cross-border transactions, and of those taking place in a regulated industry in a sample of 288 M&A announcements. These merger announcements all took place among publicly traded firms in the European Union during the period 1998-2000.

Panel A. Breakdown by Country

	Targets	Acquirers
Austria	8	9
Belgium	5	7
Denmark	8	9
Finland	7	12
France	37	38
Germany	68	64
Greece	17	16
Ireland	2	3
Italy	33	38
Luxembourg	1	1
Netherlands	12	13
Portugal	13	14
Spain	26	18
Sweden	13	10
UK	38	36

Panel B. Breakdown by Industry

	Targets	Acquirers
Agriculture, For. and Fish.	1	0
Mineral Ind. and Constr.	17	19
Manufacturing	92	83
Transp, Comm. and Utilities.	32	37
Distribution	23	13
Finance, Ins. and Real Estate	93	119
Service Industries	30	17

Panel C. Other characteristics

1998	41
1999	77
2000	170
National	198
Cross-border	90
Regulated	64

Table 4. Excess Returns by Type of Merger

Sample mean, t-statistic, and 5% confidence interval of the distribution of excess returns to target, acquirer, and value creation of merger announcements. Value creation is measured as the weighted average of target and acquirer returns. Excess returns are calculated as the difference between shareholder returns and expected shareholder returns, measured using the CAPM. Each column of the table reports the statistics for the distribution of excess returns over four intervals around the announcement date, t. The 5% confidence interval on the distribution of excess returns has been adjusted for skewness following the method described in Lyon *et al.* (1999).

		(t-1,t+5)	(t-1,t+28)	(t-7,t+7)	(t-30,t+30)
Targets					
All mergers	Excess return	3.44% **	2.76% **	5.78% **	9.09% **
	t-stat	6.02	2.87	7.43	7.14
	5% conf. band	-2.07	-2.24	-2.08	-2.04
		1.98	1.91	1.88	2.06
National	Excess return	3.47% **	3.13% **	6.30% **	9.29% **
	t-stat	4.93	2.58	6.53	5.83
	5% conf. band	-2.05	-2.05	-2.20	-2.07
		1.94	2.11	2.06	2.00
Cross-border	Excess return	3.35% **	1.97%	4.65% **	8.65% **
	t-stat	3.45	1.28	3.55	4.08
	5% conf. band	-2.57	-2.27	-2.68	-2.32
		1.97	2.09	2.01	1.98
Regulated	Excess return	1.34%	0.01%	4.84% **	4.56% *
	t-stat	1.02	0.03	2.71	1.69
	5% conf. band	-3.62	-2.89	-4.65	-3.17
		1.94	2.06	1.78	1.93
Unregulated	Excess return	4.03% **	3.55% **	6.05% **	10.38% **
	t-stat	6.45	3.17	6.95	7.10
	5% conf. band	-2.25	-2.11	-2.06	-1.92
		1.90	1.82	1.83	1.93
Acquirers					
All mergers	Excess return	0.04%	-0.55%	0.08%	0.27%
	t-stat	0.12	-0.84	0.17	0.26
	5% conf. band	-2.37	-2.44	-2.43	-2.18
		1.86	2.06	2.16	2.15
National	Excess return	0.47%	-0.09%	0.49%	1.37%
	t-stat	1.00	-0.11	0.78	1.02
	5% conf. band	-2.52	-2.21	-2.40	-2.11
		1.98	2.24	1.98	2.17
Cross-border	Excess return	-0.90% *	-1.54%	-0.82%	-2.14%
	t-stat	-1.94	-1.56	-1.22	-1.50
	5% conf. band	-2.20	-2.32	-2.21	-2.04
		2.11	2.15	2.25	2.43
Regulated	Excess return	-0.64%	-0.20%	-0.55%	-1.99%
	t-stat	-1.01	-0.15	-0.60	-1.07
	5% conf. band	-1.93	-2.30	-2.44	-2.33
		3.06	2.01	2.37	2.19
Unregulated	Excess return	0.24%	-0.64%	0.26%	0.91%
	t-stat	0.59	-0.85	0.47	0.74
	5% conf. band	-2.20	-2.17	-2.45	-2.47
		2.02	2.04	2.20	2.11

*/** denote significance at the 10%/5% level.

Table 5. Average excess returns and % of mergers with positive excess returns

Sample statistics of the distribution of excess returns to target, acquirer, and value creation, measured as the weighted average of target and acquirer returns, of merger announcements. Excess returns are calculated as the difference between shareholder returns and expected shareholder returns, measured using the CAPM. Each row reports the statistics on excess returns for four intervals around the announcement date, t.

	All mergers		National mergers		Cross-border mergers		Mergers in regulated inds		Mergers in unreg. inds.	
	Mean	% of pos.	Mean	% of pos.	Mean	% of pos.	Mean	% of pos.	Mean	% of pos.
Target Excess Returns										
(t-1,t+5)	3.44%	59.2%	3.47%	59.5%	3.35%	58.4%	1.34%	46.0%	4.03%	62.9%
(t-1,t+28)	2.76%	53.5%	3.13%	54.4%	1.97%	51.7%	0.01%	39.7%	3.55%	57.5%
(t-7,t+7)	5.78%	59.9%	6.30%	61.0%	4.65%	57.3%	4.84%	57.1%	6.05%	60.6%
(t-30,t+30)	9.09%	63.7%	9.29%	63.6%	8.65%	64.0%	4.56%	50.8%	10.38%	67.4%
Acquirer Excess Returns										
(t-1,t+5)	0.04%	48.6%	0.47%	49.7%	-0.90%	46.1%	-0.64%	49.2%	0.24%	48.4%
(t-1,t+28)	-0.55%	44.7%	-0.09%	44.6%	-1.54%	44.9%	-0.20%	42.9%	-0.64%	45.2%
(t-7,t+7)	0.08%	48.9%	0.49%	51.3%	-0.82%	43.8%	-0.55%	46.0%	0.26%	49.8%
(t-30,t+30)	0.27%	48.2%	1.37%	49.7%	-2.14%	44.9%	-1.99%	42.9%	0.91%	49.8%
Joint Excess Returns(1)										
(t-1,t+5)	0.64%	53.5%	1.24%	56.4%	-0.64%	47.2%	-1.04%	46.7%	1.06%	55.2%
(t-1,t+28)	-0.35%	46.5%	0.22%	50.6%	-1.59%	37.5%	-2.06%	31.1%	0.07%	50.3%
(t-7,t+7)	0.94%	56.1%	1.64%	60.3%	-0.57%	47.2%	-0.78%	44.4%	1.36%	59.0%
(t-30,t+30)	0.81%	50.0%	1.91%	52.6%	-1.58%	44.4%	-4.20%	35.6%	2.04%	53.6%

(1) Data on value creation are only available for 231 merger deals.

Table 6. Differences in Excess Returns by Type of Merger

Differences in mean excess returns to target, acquirer, and value creation between national and cross-border mergers and between mergers in regulated and unregulated industries. Excess returns are calculated as the difference between shareholder returns and expected shareholder returns, measured using the CAPM. Each column of the table reports the statistics for the distribution of excess returns over four intervals around the announcement date, t.

		(t-1,t+5)	(t-1,t+28)	(t-7,t+7)	(t-30,t+30)
National vs. Cross-border					
Targets	Cross-border	3.35%	1.97%	4.65%	8.65%
	National	3.47%	3.13%	6.30%	9.29%
	Diff	-0.12%	-1.16%	-1.66%	-0.64%
	p-value	0.47	0.30	0.20	0.41
Acquirers	Cross-border	-0.90%	-1.54%	-0.82%	-2.14%
	National	0.47%	-0.09%	0.49%	1.37%
	Diff	-1.38% **	-1.45%	-1.31%	-3.51% *
	p-value	0.04	0.15	0.11	0.06
Value creation (1)	Cross-border	-0.64%	-1.59%	-0.57%	-1.58%
	National	1.24%	0.22%	1.64%	1.91%
	Diff	-1.88% **	-1.81%	-2.21% **	-3.48% *
	p-value	0.01	0.12	0.03	0.07
Regulated vs. non-regulated					
Targets	Non-regulated	4.03%	3.55%	6.05%	10.38%
	Regulated	1.34%	0.01%	4.84%	4.56%
	Diff	2.70% **	3.54% *	1.21%	5.82% **
	p-value	0.04	0.07	0.29	0.04
Acquirers	Non-regulated	0.24%	-0.64%	0.26%	0.91%
	Regulated	-0.64%	-0.20%	-0.55%	-1.99%
	Diff	0.87%	-0.45%	0.81%	2.90%
	p-value	0.16	0.61	0.25	0.13
Value creation (1)	Non-regulated	1.06%	0.07%	1.36%	2.04%
	Regulated	-1.04%	-2.06%	-0.78%	-4.20%
	Diff	2.10%	2.13%	2.14%	6.24%
	p-value	0.02 **	0.12	0.05 **	0.01 **

*/** denote significance at the 10%/5% level.

(1) Data on value creation are only available for 231 merger deals.

Table 7. Regression analysis of excess returns. Basic specification

Estimated coefficients of equation (1) in a sample of 284 merger and acquisition announcements. For each return window, column (1) refers to the estimation of equation (1) without allowing for target country fixed effects, and column (2) reports estimated parameters for equation (1).

	Targets				Acquirers				Value creation			
	(t-1,t+5)		(t-30,t+30)		(t-1,t+5)		(t-30,t+30)		(t-1,t+5)		(t-30,t+30)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Constant	4.80 **	c.s.	11.93 **	c.s.	-0.81	c.s.	-1.27	c.s.	-0.22	c.s.	0.30	c.s.
	(1.30)		(2.69)		(0.59)		(1.75)		(0.77)		(1.94)	
DC	-1.09	-0.60	-2.21	-2.19	1.48 *	1.11	3.09	0.79	1.77 *	1.20	2.41	0.74
	(1.56)	(1.61)	(3.29)	(3.46)	(0.80)	(0.85)	(2.39)	(2.61)	(0.94)	(1.05)	(2.52)	(2.67)
Ind	-5.39 **	-4.06	-12.22 **	-10.77 **	-0.35	-0.70	-3.24	-4.25	-1.44	-1.89	-6.44 **	-6.98 **
	(2.39)	(2.58)	(4.18)	(4.39)	(0.99)	(1.12)	(3.13)	(3.59)	(1.39)	(1.48)	(3.00)	(3.41)
DC*Ind	4.20	3.07	10.02	9.52	-0.63	-0.17	0.97	2.15	-0.61	0.04	1.23	4.01
	(3.18)	(3.36)	(6.36)	(6.6)	(1.56)	(1.65)	(4.26)	(4.75)	(1.80)	(1.93)	(4.18)	(4.63)
Dif. in excess returns between:												
Regulated: Nat. vs. C-B	3.11	2.47	7.81	7.33	0.85	0.94	4.06	2.94	1.16	1.24	3.64	4.75
(H0: a1+a3=0)	*0.26*	*0.40*	*0.15*	*0.19*	*0.53*	*0.51*	*0.25*	*0.44*	*0.45*	*0.47*	*0.28*	*0.20*
Unregulated: Nat. vs. C-B	-1.09	-0.60	-2.21	-2.19	1.48 *	1.11	3.09	0.79	1.77 *	1.20	2.41	0.74
(H0: a1=0)	*0.49*	*0.71*	*0.50*	*0.53*	*0.07*	*0.19*	*0.20*	*0.76*	*0.06*	*0.26*	*0.34*	*0.78*
National: Reg. vs. unreg.	-1.19	-0.99	-2.20	-1.25	-0.98	-0.87	-2.27	-2.10	-2.05 *	-1.85	-5.21 *	-2.97
(H0: a2+a3=0)	*0.57*	*0.65*	*0.65*	*0.81*	*0.41*	*0.47*	*0.43*	*0.50*	*0.08*	*0.14*	*0.07*	*0.35*
Cross-border: Reg. vs. unr.	-5.39 **	-4.06	-12.22 **	-10.77 **	-0.35	-0.70	-3.24	-4.25	-1.44	-1.89	-6.44 **	-6.98 **
(H0: a2=0)	*0.03*	*0.12*	*0.00*	*0.02*	*0.72*	*0.54*	*0.30*	*0.24*	*0.30*	*0.20*	*0.03*	*0.04*

*/** denote significance at the 10%/5% level.

Standard errors in brackets. p-values in italics.

Four observations with excess returns above 100% were considered as outliers and dropped from the sample for estimation purposes.

Table 8. Regression analysis of excess returns. Continental Europe vs. United Kingdom

Estimated coefficients of equation (1) for excess returns to target, acquirer and total value generated by the merger. For each case the estimated coefficients for two different samples are reported. The first column reports results for the mergers and acquisitions in which the target firm was from Germany, France, Italy or Spain. The second column reports results for mergers and acquisitions where a UK firm was the target.

	Targets				**Acquirers**				**Value creation**			
	(t-1,t+5)		(t-30,t+30)		(t-1,t+5)		(t-30,t+30)		(t-1,t+5)		(t-30,t+30)	
	Cont. E.	U.K	Cont. E.	U.K	Cont. E.	U.K	Cont. E.	U.K	Cont. E.	U.K	Cont. E.	U.K
Constant	5.20 **	0.53	10.39	9.92	-0.59	-0.55	0.52	-0.21	0.70	-2.13	-0.04	3.71 **
	(1.61)	(2.63)	(3.50)	(9.84)	(0.91)	(1.46)	(2.74)	(4.24)	(1.13)	(1.52)	(3.05)	(1.37)
DC	4.39	18.82	11.58 *	26.87	-1.54	-0.94	5.40	0.40	0.85	-2.36	8.34 *	-22.91 *
	(3.20)	(12.79)	(6.43)	(30.79)	(1.97)	(6.61)	(4.82)	(18.27)	(1.82)	(10.97)	(5.01)	(11.63)
Ind	-6.98 **	-8.51	-12.60 **	-5.80	-0.15	-1.00	-4.74	2.63	-2.12	-5.61	-6.37 *	-3.48
	(1.94)	(7.30)	(4.54)	(19.11)	(1.19)	(3.80)	(3.68)	(6.00)	(1.36)	(7.11)	(3.64)	(10.35)
DC*Ind	-1.54	4.95	-4.02	4.61	1.23	1.01	-1.73	-3.65	0.43	5.00 **	-0.88 *	-2.09
	(1.93)	(3.46)	(4.26)	(10.78)	(1.17)	(1.79)	(3.35)	(6.05)	(1.33)	(1.76)	(3.64)	(4.87)
Dif. in excess returns between:												
Regulated: Nat. vs. C-B	2.85	23.77 *	7.56	31.48	-0.31	0.07	3.67	-3.25	1.28	2.64	7.46 **	-25.00 **
(H_0: a1+a3=0)	*0.27*	*0.06*	*0.12*	*0.28*	*0.85*	*0.99*	*0.29*	*0.85*	*0.31*	*0.81*	*0.03*	*0.02*
Unregulated: Nat. vs. C-B	4.39	18.82	11.58 *	26.87	-1.54	-0.94	5.40	0.40	0.85	-2.36	8.34 *	-22.91 **
(H_0: a1=0)	*0.17*	*0.14*	*0.07*	*0.38*	*0.44*	*0.89*	*0.26*	*0.98*	*0.64*	*0.83*	*0.10*	*0.05*
National: Reg. vs. unreg.	-8.52	-3.56	-16.62	-1.19	1.08	0.01	-6.47	-1.02	-1.69	-0.61	-7.25	-5.57 **
(H_0: a2+a3=0)	*0.31*	*0.33*	*0.82*	*0.38*	*0.28*	*0.72*	*0.83*	*0.86*	*0.30*	*0.34*	*0.57*	*0.00*
Cross-border: Reg. vs. unr.	-6.98 **	-8.51	-12.60 **	-5.80	-0.15	-1.00	-4.74	2.63	-2.12	-5.61	-6.37 *	-3.48
(H_0: a2=0)	*0.00*	*0.25*	*0.01*	*0.76*	*0.90*	*0.79*	*0.20*	*0.66*	*0.12*	*0.43*	*0.08*	*0.74*

*/** denote significance at the 10%/5% level.
Standard errors in brackets. p-values in italics.
Four observations with excess returns above 100% were considered as outliers and dropped from the sample for estimation purposes.

Table 9. Impact of merger waves on excess returns

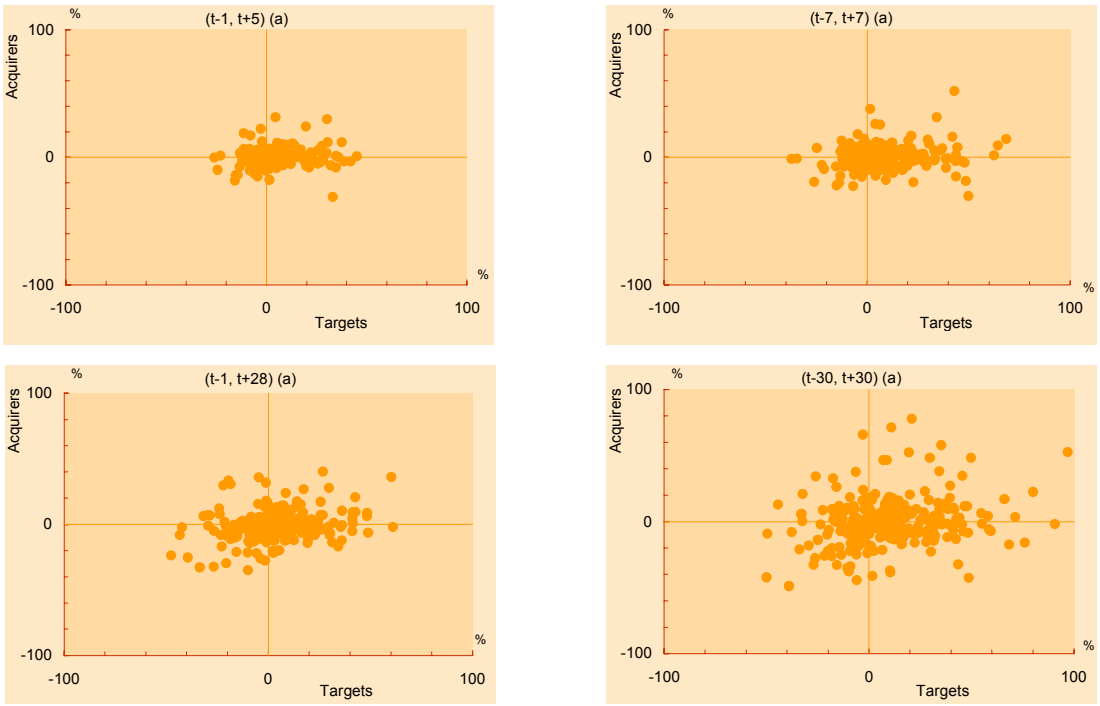
Estimated coefficients of equation (1), without target country fixed effects, and with the additional variable MWE(MWN). The variable MWE (MWN) is the average of the joint excess returns for the window [t-30,t+30] of mergers that have taken place in the same industry in the European Union (involving targets from the same country) during the past six months.

	Targets				**Acquirers**				**Value creation**			
	(t-1,t+5)		(t-30,t+30)		(t-1,t+5)		(t-30,t+30)		(t-1,t+5)		(t-30,t+30)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Constant	6.16 **	6.12 **	12.16 **	12.00 **	-0.91	-0.98	-1.60	-1.82	0.12	0.06	-0.22	-0.41
	(1.59)	(1.59)	(2.95)	(2.99)	(0.68)	(0.66)	(1.88)	(1.83)	(0.82)	(0.81)	(1.89)	(1.86)
DC	-1.82	-1.60	-2.19	-1.46	1.36	1.71 **	2.10	3.29	1.18	1.46	1.79	2.82
	(1.88)	(1.86)	(3.65)	(3.68)	(0.88)	(0.87)	(2.55)	(2.52)	(1.01)	(0.99)	(2.50)	(2.47)
Ind	-7.49 **	-7.51 **	-11.58 **	-11.90 **	-1.05	-0.99	-3.66	-3.22	-2.16	-2.14	-5.24 *	-4.98
	(2.98)	(3.03)	(4.75)	(4.97)	(1.03)	(1.09)	(3.86)	(3.44)	(1.36)	(1.47)	(3.20)	(3.08)
DC*Ind	3.34	3.42	4.84	5.17	0.65	0.76	0.43	0.74	0.27	0.37	0.87	1.17
	(3.48)	(3.56)	(6.33)	(6.49)	(1.57)	(1.62)	(4.95)	(4.77)	(1.84)	(1.94)	(4.29)	(4.33)
MWN	13.74		39.43 **		22.96 **		82.77 **		18.31 *		69.45 **	
	(14.18)		(14.83)		(8.07)		(20.17)		(9.62)		(15.87)	
MWE		7.19		10.04		15.13 **		63.21 **		11.46		48.65 **
		(9.89)		(15.62)		(7.36)		(17.33)		(7.52)		(15.38)
Dif. in excess returns between:												
Regulated: Nat. vs. C-B	1.52	1.82	2.65	3.71	2.01	2.47 *	2.53	4.03	1.45	1.83	2.66	3.99
(H0: a1+a3=0)	*0.61*	*0.55*	*0.61*	*0.49*	*0.13*	*0.07*	*0.55*	*0.32*	*0.35*	*0.27*	*0.45*	*0.26*
Unregulated: Nat. vs. C-B	-1.82	-1.60	-2.19	-1.46	1.36	1.71 **	2.10	3.29	1.18	1.46	1.79	2.82
(H0: a1=0)	*0.33*	*0.39*	*0.55*	*0.69*	*0.12*	*0.05*	*0.41*	*0.19*	*0.25*	*0.14*	*0.47*	*0.25*
National: Reg. vs. unreg.	-4.15 **	-4.09 **	-6.74	-6.73	-0.40	-0.23	-3.23	-2.48	-1.89	-1.77	-4.37	-3.81
(H0: a2+a3=0)	*0.02*	*0.03*	*0.11*	*0.11*	*0.74*	*0.85*	*0.30*	*0.46*	*0.13*	*0.16*	*0.13*	*0.22*
Cross-border: Reg. vs. unr.	-7.49 **	-7.51 **	-11.58 **	-11.90 **	-1.05	-0.99	-3.66	-3.22	-2.16	-2.14	-5.24 *	-4.98
(H0: a2=0)	*0.01*	*0.01*	*0.02*	*0.02*	*0.31*	*0.37*	*0.34*	*0.35*	*0.11*	*0.15*	*0.10*	*0.11*

*/** denote significance at the 10%/5% level.
Standard errors in brackets. p-values in italics.
Four observations with excess returns above 100% were considered as outliers and dropped from the sample for estimation purposes.

FIGURE 1

Excess returns to target and acquiring firms, 1998-2000



(a) t denotes announcement date

APPENDIX: DATA DESCRIPTION

The initial sample analyzed in this study consists of 1,038 M&A announcements over a three-year period from 1998 to 2000. Each merger in our sample satisfies the following selection criteria: a) both the target and acquiring companies are from EU countries and b) the merging companies are listed. Once we exclude those transactions in which the target and the acquirer is the same company, the sample size drops to 724 deals. This size is further reduced when we exclude those mergers where stock returns are not available either for the target or for the acquirer. In this sample (unmatched sample) of 688 mergers return information is available for 410 target firms and for 561 acquiring firms. Our basic sample is that consisting of those transactions where return information for target and acquirers is available. This matched sample includes 288 deals. Additional data requirements imply further reductions in the sample size. Thus, market capitalization (sales) for both merging firms is only available in 231 (204) cases. Table A.1 summarizes this information.

Table A.1. M & As Samples

	(I) Initial sample	(II) Excluding buybacks	(III) Unmatched sample	(IV) Matched sample	(V) With market value data	(VI) With sales data
Number of M & As	1038	724	688	288	231	204
With data on target return	540	410	410	288	231	204
With data on acquirer return	688	561	561	288	231	204

(I) Original sample
(II) Excluding target = acquirer
(III) Excluding those with a missing value both on target and acquirer return
(IV) Matched sample (Requiring data both on target and acquirer return)
(V) Excluding those without data on market value
(V) Excluding those without data on sales

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