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CROSS-BORDER MERGERS & ACQUISITIONS IN DIFFERENT LEGAL ENVIRONMENTS

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Abstract

The aim of this paper is to analyze the influence of the legal and institutional environment on bidder firm returns around the announcement date of cross-border Mergers and Acquisitions (M&As). The database includes 469 M&As of European (221 cross-border and 248 domestic) listed firms, with target firms being worldwide public or private firms (40 countries), over the 2002-2006 period.

Shareholders of bidder firms place greater value on cross-border M&A announcements than on domestic ones. Cumulative Average Abnormal Return (CAAR), in (-1,+1), is 0.99% for the whole sample, 1.38% for cross-border deals and 0.64% for domestic ones. CAAR of

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cross-border M&As is more positive if the target firm belongs to an environment that is less-developed than that of the bidder. The better (poorer) the legal and institutional environment of the bidder in comparison with that of the target country, the more positive (negative) the effect on bidder shareholders' valuation of M&As.

EFM Codes: 150; 160; 210; 750.

JEL Codes: *G30; G32; G34; F30.*

Key Words: *Mergers and Acquisitions (M&As), Cross-border deals, bidder abnormal return, legal environment, investor protection.*

1. Introduction

The aim of this study is to analyze shareholders' valuation of M&A announcements, examining the differences between bidder shareholder valuation in cross-border and domestic M&As, and considering the influence of the different legal and institutional environments.

There are two main motivations for the paper. First, the mixed results in empirical research in relation to firm shareholders' valuation after M&A announcements. While research studies agree on the positive valuation made by acquired-firm shareholders, the same does not occur when analyzing the valuation of acquiring-firm shareholders. Some studies conclude that acquiring-firm shareholders negatively value the announcement of an M&A, while others obtain positive abnormal returns. These mixed results also appear in studies focusing only on cross-border M&As. And secondly, recent studies find that the legal and institutional environment of the firms' countries influences shareholder valuation after cross-border M&A announcements.

The database to test the theoretical proposals considers M&As for European listed firms over the 2002-2006 period, distinguishing between cross-border and domestic deals, with target

firms being worldwide public or private firms. We compare bidder shareholder wealth creation in cross-border and domestic M&As, following the event study methodology. We also analyze the effect of the legal and institutional environment of the firms' countries on the bidder shareholders' valuation, developing a multivariate analysis.

This paper presents a database which includes acquisitions involving both listed and unlisted target firms. This is a broader sample than those in other research studies, which consider only European firms (Martynova and Renneboog, 2008), only American firms (Moeller and Schlingemann., 2005; Francis et al., 2008), only listed firms (Bris and Cabolis, 2008; Martynova and Renneboog, 2008), or only financial or non-financial firms (Hangendorff et al., 2007; Martynova and Renneboog, 2008).

Our main findings show that the bidder shareholder return is more positive in cross-border deals than in domestic ones. The better (poorer) the legal and institutional environment in the bidder country in comparison with that of the target country, the more positive (negative) the effect on the bidder shareholders' valuation.

We structure the paper as follows. In the second section, we review the financial literature on shareholder valuation of M&As in cross-border transactions and the influence of the legal and institutional environment, proposing the hypotheses to be studied. In the third section, we present the database and descriptive statistics. In the fourth section, we estimate the abnormal returns and analyze how they differ according to the legal and institutional environment. In the fifth section, we carry out a multi-variant analysis of abnormal return determinants. And, in the sixth and final section, we present the conclusions.

2. Research background: bidder shareholders' valuation of M&As

One of the motivations for this paper are the contradictory results in empirical studies on the acquiring-firm shareholders' valuation. While research studies agree on the positive valuation that acquired-firm shareholders make of M&A announcements, the same does not occur when analyzing the valuation of acquiring-firm shareholders. Some studies conclude that acquiring-firm shareholders negatively value the announcement of an M&A³, while others obtain positive abnormal returns⁴. To reflect upon the reasons for these divergences, it is necessary to examine the differences in the databases analyzed, as well as to study the relevance of the characteristics of the firms involved and the transactions. Among the former studies, concerning firms listed in the USA, Travlos (1987) obtains a cumulative abnormal return for the acquiring firm of -1.6% when payment is made in shares of stock and of -0.13% when in cash. For the USA, Chang (1998) reports a cumulative abnormal return of 0.09% when unlisted firms are acquired and payment is in cash, and -0.02% when the target firms are listed. When the transaction payment is in equity, the abnormal return takes the value of 2.64%, if the target firm is unlisted, and -2.46%, if listed.

The increase in merger and acquisition operations in the European market since the 1990s allows for a comparison of results with those of the American market. Several papers focus on acquisitions carried out by European financial firms, such as Cybo-Ottone and Murgia (2000), who report positive abnormal returns of 0.99% for acquiring-firm shareholders, although some obtain negative cumulative returns: Beitel and Arbour (2002), -0.01% for operations in any part of the world; Campa and Hernando (2006), -0.87% for European transactions; and

³Travols, 1987; Walter, 2000; De Long, 2001; Beitel and Arbour, 2002; Gregory and McCorriston, 2002; Georgen and Renneboog, 2004; Campa and Hernando, 2006; Hagedorff, Collins, and Keasey, 2007.

⁴Maquieria, Megginson and Nail, 1998; Fuller, Netter and Stegemoller, 2002; Campa and Hernando, 2004; Moeller, Schillingemann and Stulz, 2004; Ben-Amar and André, 2006; Faccio, McConnell and Stolin, 2006.

Hagendorff et al. (2007), -0.32% for European and American financial firms. In the USA, studies with databases starting from the 1980s or 90s again obtain diverse results: Mulherin and Boone (2000), -0.37 %; Walker (2000), -0.30% for non-financial firms; and DeLong (2001), -1.68%, while Moeller et al. (2004) obtain abnormal returns of 1.10% and Fuller et al. (2002), 1.77% for non-financial firms.

2.1. Acquiring-shareholder valuation determinants: transaction and firm characteristics

After reviewing the research to date, we highlight the following characteristics of the transactions and firms involved as determinants for acquiring-shareholder valuation:

- a) *Cross-Border vs Domestic Transactions.* Earlier studies found mixed results regarding the effect of cross-border M&As on the bidder return, and a positive effect if domestic M&As. The internationalization theory predicts a positive return from cross-border acquisitions, associated with gains from geographic diversification when firms seek synergies from their intangible assets (Baldwin and Caves, 1991; Morck and Yeung, 2003). However, other studies consider a negative effect on return in cross-border acquisitions, due to more asymmetric information problems valuing foreign targets. Doukas and Travlos (1988); Doukas (1995) and La Porta et al. (2000) show that cross-border M&As create value. Others (Denis, Denis and Yost, 2002; Moeller and Schlingemann, 2005) show that cross-border transactions destroy value. Studies for periods following the 1990s agree on the positive acquiring-firm shareholder valuation for cross-border M&A announcements, both in the United States (Francis, Hansan and Sun, 2007) and in Europe (Martynova and Renneboog, 2008; Antoniu, Petmezas and Zhao, 2007; Conn, Cosh, Guest and Hjughes, 2005), although domestic operations generate greater returns.

- b) *Method of payment.* If management considers that their firm's shares are overvalued, they will prefer to pay an M&A operation in equity. Thus, the announcement of an acquisition paid in equity will be a negative signal to the acquiring-firm's shareholders and therefore valued negatively (Myers and Majluf, 1984). On the other hand, they will positively value payment in cash (Travlos, 1987; Sudarsanam and Mahate, 2003).
- c) *Friendly vs hostile takeover.* Hostile takeovers raise the price paid for the target firm, which determines a negative acquiring-firm shareholder valuation (Schwert, 1996; Gregory, 1997; Schwert, 2000; Campa and Hernando, 2004).
- d) *Focus vs diversification.* Empirical studies obtain mixed results regarding M&A valuation which implies the diversification of business focus. Buying a firm from the same industry or from outside it will depend on the firm's strategy. If the firm is searching for operative synergies, it will acquire a firm from the same industry. However, if the bidder firm prefers to obtain financial synergies, it will buy a firm from an industry not related to its main activity. Jensen and Ruback (1983), Bradley, Desai and Kim (1988), Campa and Kedia (2002), and Raj and Forsyth (2002) associate wealth creation with diversification in M&As; while Morck, Shleifer and Vishny (1990), Lang and Stulz (1994), Berger and Ofek (1995), and Maquieria et al. (1998) conclude that diversification diminishes acquiring-shareholder wealth owing to bidder managers' overestimation of future performance, which leads them to overprice the transaction.
- e) *Managerial opportunism and growth opportunities.* Firms with free cash-flow are more likely to carry out acquisitions no matter what the circumstances are (Harford, 1999), so their shareholders are likely to negatively value the announcement. Lang, Stulz and Walking (1989) show that firms with a high market-to-book ratio obtain high abnormal returns around the acquisition announcement, while Dong, Hirshleifer,

Richardson and Teoh (2006) find the contrary, which leads them to consider the ratio as a proxy for overvaluation.

- f) *Size of acquiring firm.* The greater the separation between ownership and control, which tends to be the case in large firms, the greater the managerial interest in M&As is likely to be, even if the price is excessive (managerial hubris hypothesis, Roll, 1986), resulting in a worse valuation on the part of the acquiring-firm's shareholders (Schwert, 2000; Beitel and Arbour, 2004; Moeller, 2004).
- g) *Relative size of the target firm.* The larger the target firm, the more information there will be on it, as well as fewer adverse selection problems in its valuation (Asquith, Bruner and Mullins, 1983). However, this will generate higher integration costs between the two firms (Agrawal, Jaffe and Mandelker, 1992), which acquiring-firm shareholders will value negatively.
- h) *Target Firm Listing.* The majority of studies analyze acquisitions of market listed firms. Acquiring a listed firm generates the *free-rider* problem (Grossman and Hart, 1980) by attracting potential buyers, which raises the payment price. The acquisition of an unlisted firm does not generate as much competition. Moreover, adverse selection forces the price to drop (Akerlof, 1970). Faccio et al. (2006) obtain positive abnormal returns, 1.48%, when the target firm is unlisted, and negative returns, -0.38%, when it is listed. Chang (1998), Fuller et al. (2002), Moeller et al. (2004), and Conn et al. (2005) also show greater gains when purchasing private companies.

Furthermore, the classic negative effect of share payment may turn to positive when the bidder buys a private target (Fuller et al., 2002). A private target probably has a more concentrated ownership, with some managers being shareholders. In this case, if the deal is paid with equity, the target managers will become shareholders of the new

firm, having incentives to monitor the bidder managers. Current bidder shareholders will positively value this increase in monitoring (Chang, 1998; Fuller et al., 2002, Faccio et al. 2006).

2.2. Influence of the legal and institutional environment on cross-border merger-acquisition valuation

Another motivation of this paper is the recent empirical evidence in relation to the influence of the legal and institutional environment on shareholders valuation at the announcement of cross-border M&As (Conn et al., 2005; Moeller et al., 2005; Bris and Cabolis, 2008; Francis et al., 2008; Martynova and Renneboog., 2008; Pablo, 2008).

Since La Porta et al. (1998), many studies have analyzed the relationship between the institutional and legal environment in which firms operate with corporate finance practices and firm valuation. Rossi and Volpin (2004) focus on the influence of the legal environment in cross-border takeovers. They find that countries with higher shareholder protection have more M&A activity and that, in cross-border M&As, target firms are in countries that afford less shareholder protection than those of the bidders. Being acquired by a firm with greater shareholder protection may improve the efficiency of target firms having poor legal and institutional environments but the benefits are not so clear for bidder firms. The characteristics of the legal and institutional environments in the bidder and target countries might explain the different effects on bidder shareholder valuation in cross-border M&As.

This study aims to examine the bidder shareholder M&A valuation and to what extent it depends on the legal and institutional environment in cross-border M&As. We consider that two contrasting types of hypotheses may be established and will later examine in our empirical analysis which of these predominates.

- 1) On the one hand, transactions involving a target in a country with less-developed governance systems or capital markets (low minority shareholder protection, poor accounting standards, low creditor protection, highly concentrated ownership, less economic freedom, less stock market capitalization, less economic development, poor corruption control) will take place in a market with “less” active and “less” competitive corporate control. In this environment, the likelihood of finding undervalued target firms increases. Thus, bidder wealth appropriation will be valued positively by acquiring shareholders (Rossi and Volpin, 2004; Starks and Wei, 2004; Hagendorff et al., 2007; Bris and Cabolis, 2008; Martynova and Renneboog, 2008).

***Hypothesis 1:** If the target belongs to a country with less-developed capital markets (more-developed capital markets), the bidder shareholders’ return will be positive (negative) at the announcement of the transaction.*

Furthermore, if the bidder comes from a country with more-developed governance systems and buys 100% of the shares, the target firm will adopt better corporate governance practices and will show a greater degrees of transparency and shareholder protection. This improvement of efficiency in the acquiring firms’ governance system increases the wealth created by the acquisition for both firms (Starks and Wei, 2004; Bris and Cabolis, 2008; Martynova and Renneboog, 2008).

***Hypothesis 1.1:** If the target belongs to a country with a less-developed governance system (more-developed governance system) and the bidder buys 100% of the shares, the bidder shareholders’ return will be more positive (more negative) at the announcement of the transaction.*

Unlike previous studies, our database distinguishes between public and private target firms so we can carry out an in-depth analysis of the influence of the legal and

institutional environment on bidder shareholders' returns. Transactions involving targets in countries with more-developed capital markets will take place in markets with "more" active and "more" competitive corporate control. In these environments, the likelihood of finding undervalued target firms decreases. Competition from potential bidders will increase the premium paid in the deal. This premium will be higher if the target is a public firm.

***Hypothesis 1.2:** If the target belongs to a country with a more-developed capital market (less-developed capital market) and it is a public firm, the bidder shareholders' return will be more negative (more positive) at the announcement of the transaction.*

- 2) On the other hand, transactions involving targets in countries with less-developed capital markets may generate problems and decrease the value of the M&A. Low minority shareholder protection, poor accounting standards, low creditor protection, highly concentrated ownership, less economic freedom, less stock market capitalization, less economic development and poor corruption control hinder acquisition negotiations and increase the risk of operating in these countries. Also, the lack of shareholder protection will increase the probability of local managers pursuing their own interests, contrary to shareholders' interests. Therefore, a negative M&A valuation will be expected on the part of the acquiring shareholders (Dahlquist, Pinkowitz, Stulz and Williamson, 2003; Rossi and Volpin, 2004; Moeller and Schlingemann, 2005).

***Hypothesis 2:** If the target belongs to a country with less-developed capital markets (more-developed capital markets), the bidder shareholders' return will be negative (positive) at the announcement of the transaction.*

3. Database

The database to test the above hypotheses is made up of listed European firms which announced an M&A during the 2002-2006 period, with the target firm being listed or unlisted in any country in the world, with or without prior participation by the acquiring firm or a subsidiary of another firm. The analysis of this broad sample is one of the contributions of this study, given that other studies have been limited to a specific geographical region or have not considered unlisted target firms.

We obtained our dataset from the Thomson One Banker *Merger & Acquisitions Database*, DataStream, Lexis Nexis and Amadeus. The sample meets the following criteria:

- (i) All M&As announced by a European listed company for the period 2002-2006, which have been completed to date;
- (ii) Both domestic and cross-border transactions are considered;
- (iii) Target firms may be listed, private or a subsidiary of the acquiring firm, in any part of the world;
- (iv) The transaction involves a change in control.

Starting with the 1,058 mergers and acquisitions initially identified, we eliminated those transactions in which:

- (i) The share price is not available in Datastream (198 operations).
- (ii) There are relevant discrepancies regarding the announcement dates between Thomson One Banker and Lexis-Nexis (32 operations).
- (iii) The acquiring firm announces more than one transaction in the event window, (-20, +20) (129 operations).
- (iv) The beta parameter of the market model is not significant at the 95% confidence level (230 operations).

The final sample of M&A announcements consists of 469 transactions involving firms from 42 countries, with a total market value of over US\$ 18,400 billion and an average of over US\$ 39,308.8 million. Acquiring firms paid, on average, US\$ 726.456 million for target firms. In

cross-border M&As acquiring firms paid, on average, U\$ 942.198 million for target firms and in domestic M&As, U\$ 534.196 million.

3.1. Sample description

Table 1 shows M&A distribution according to the geographical area of both the acquiring and the target firm. 44.5% of all operations are announced by firms from the United Kingdom.

(Table 1)

Table 1 shows the number of transactions in the database, classifying them in accordance with the legal system of both the acquiring and target firm countries. In line with La Porta et al. (1998), we classify countries using the following system: English (common law) and German, Scandinavian, French, and Communist (civil law). There is no transaction in a country with a Communist legal system in the sample. The majority of operations takes place among countries with the same legal system. Note should be taken of the number of transactions carried out among firms belonging to the English legal system (190 transactions out of the 469 which make up the sample), that is to say, with a strong shareholder protection environment.

Table 2 includes the descriptive statistics for the entire M&A dataset, distinguishing between domestic and cross-border M&As. Cross-border M&As, compared to domestic M&As, use more cash payment, less equity payment, determine more related business transactions, have greater transaction value, have less relative size in comparison to the target firm (transaction value, in millions of US dollars, divided by the acquiring firm market value four weeks prior to the operation, in millions of US dollars), have more bidder total asset value (millions of US dollars) and greater market-to-book ratio, and acquire more public firms.

(Table 2)

4. Acquiring firm shareholder valuation

We shall now examine capital market valuation in M&As, following the event study methodology. We estimate abnormal returns around the M&A announcement date.

We obtain the M&A announcement dates from Thomson One Banker and Lexis Nexis. We calculate the abnormal return for each announcement (AR) in the event window (-20, +20) as the difference between daily returns and expected returns according to the market model, estimated in the period (-200, -21) before the announcement date. Datastream provides the daily *return index* for each firm, adjusted by dividends and splits. This return index allows estimation of the daily return. We follow the method of Dodd and Warner (1983) and Corrado (1989) for small sample size in order to verify the existence of significant daily abnormal returns (AR) and cumulative abnormal returns (CAR).

Table 3 shows the cumulative average abnormal return (CAAR) for bidder firm shareholders around the announcement of the M&A. The abnormal return for bidder firm shareholders on the day of the merger or acquisition transaction announcement ($t=0$) is 0.49% for the entire set of firms. This result is consistent with Chang (1998), Fuller et al. (2002), Moeller et al. (2004), Faccio et al. (2006), and Martynova and Renneboog (2006). The Cumulative Average Abnormal Return for the whole sample is 0.99%, in the interval (-1,+1), and statistically significant. Therefore, bidder firm shareholder valuation is positive for the entire set of public firms in Europe.

(Table 3)

4.1. Bidder shareholder valuation according to transaction characteristics

We now analyze the shareholders' valuation in more detail, in accordance with the aim of this paper. We compare cross-border and domestic deals, according to whether the target firm is public or private, and differentiating by method of payment. Table 4 shows the Cumulative

Average Abnormal Return for bidder shareholders in (-1, +1), taking into account their different characteristics.

The CAAR is negative when the target is a public firm, although it is not statistically different from zero. However, the CAAR is positive if the target is a private firm, 1.38%, and statistically different from zero. The difference between these two types of transactions, with public vs private targets, is also significant. These results tally with the positive valuation of bidder shareholders for private target acquisitions, given the lower competition for the transaction and thus the lower price for the deal.

The results are similar when we consider the cross-border sub-sample. The only difference is for public targets, with CAAR being negative, -0.28%, and significant. The differences between the sub-samples are also statistically significant.

When we focus on the domestic sub-sample, the CAAR is positive, 0.59%, when the M&A is paid in cash, and statistically different from zero, in accordance with other studies. The CAAR is negative, though not statistically different from zero, when the method of payment is equity. The differences are not significant. In cross-border M&As, the CAAR is positive for both methods of payment. The positive CAAR with equity payment is associated with the higher asymmetric information for foreign acquisitions. Table 4 also shows that the CAAR is higher when the bidder is smaller. The CAAR is positive and significant for both common law and civil law countries 0.76% and 1.19%, respectively.

(Table 4)

4.2. *Cross-border transaction valuation according to differences in the legal and institutional environment*

We now analyze cross-border transactions, considering the characteristics of the legal and institutional environment of both the acquiring and the target firm. The variables we take into account for each country are the following: shareholder protection, accounting standards, creditor protection, ownership concentration, economic freedom, stock market capitalization, GDP per capita and corruption control. We divide these variables in two groups: Static and dynamic variables. Previous studies use either static variables (following La Porta et al., 1998) or dynamic variables (economic freedom). However, we use both in order to compare the results.

4.2.1. *Static corporate governance variables:*

- a) *The degree of shareholder protection* (PSHARE). The variable proxies for the quality of corporate governance in the target country, defined following Rossi and Volpin (2004) and Hagedorff et al. (2007) and multiplying the revised anti-director index (La Porta et al., 2008) by a measure of the *rule of law*, which rates the law-and-order tradition (Kaufmann, Kraay and Mastruzzi, 2007).
- b) *The quality of accounting standards* (ACCOUNT). We take the index from the Center for International Financial Analysis and Research (La Porta et al., 1999, 2000).
- c) *Creditor protection* (PCREDITOR). We multiply the creditor rights index defined by Djankov, McLiesh and Shleifer (2003), a proxy for the possibility of debt financing, by the measure of legal efficiency (*rule of law*).
- d) *Ownership concentration* (OWNCONC) in each country. Calculated by La Porta et al. (1998) as the average participation of the three major shareholders in the ten largest, privately-owned, non-financial firms in each country.

4.2.2. *Dynamic economic and financial development variables:*

- e) *Economic Freedom* (EFREEDOM). This variable is taken from the Heritage Foundation. It is an index to measure the degree of economic freedom within a country, collected for each host country. It is based on 10 specific freedom-related criteria, such as trade policy, taxation, government intervention, foreign investment policy, banking, pricing controls, property rights, and regulation. A lower score proxies for greater restrictiveness in the country's economic environment (Moeller and Schlingemann, 2005; Francis et al., 2008).
- f) *Stock market capitalization* (MKCAP). This is a measure of the size of the country's stock market. It is defined as the market capitalization of the target country as a percentage of its gross domestic product one year prior to the acquisition, obtained from the World Development Indicator (World Bank).
- g) *Economic development* (GDPpc). We consider the gross domestic product per capita for each country and year (at constant prices from the year 2000), obtained from the World Economic Outlook (International Monetary Fund).
- h) *Corruption control* (CCORR). Variable defined by Kaufmann et al. (2007) for the control which a country's political system exercises to avoid distortions in the economic and financial environment, inefficiency in government and business, and instability in the political processes which obstruct foreign investment.

Table 5 shows the Cumulative Average Abnormal Return for bidder shareholders according to the differences between the bidder and target legal and institutional environments. Panel A considers a better legal and institutional environment in the bidder country when the bidder index is higher than the target index for each characteristic, and a worse legal and institutional environment when the bidder index is lower than the target index. Panel B shows the results

of an alternative classification that considers a better legal and institutional environment in the bidder country when the index is above the median of the target index and the target is below this median. Our classification considers a worse legal and institutional environment when the bidder index is below the median and the target is above this median, following Martynova and Renneboog (2008). According to this later classification there are fewer observations for each sub-sample. The differences between the better and worse environment are statistically significant when we consider the following index accounting standards, GDP per capita and corruption control. A better environment in the bidder country is positively valued by the shareholders at the announcement of cross-border M&As.

(Table 5)

This univariate analysis only obtains significant cumulative returns for extreme differences between the bidder and target legal and institutional environments. However, we carry out a multivariate analysis in the following section before reaching any conclusions. Multivariate analysis allows us to take all the possible determinants into consideration as a whole.

5. Determinants of bidder abnormal returns

We carry out a multivariate analysis in order to test the determinants of the acquiring-firm shareholders' valuation of the M&A announcement as a whole. Besides considering transaction and firm characteristics, we also examine the influence of the legal and institutional environment of both the acquiring and the target firm on cross-border deals.

5.1. Explanatory model of the acquiring-firm shareholders' valuation

The specification of the model to test the hypotheses is as follows:

$$CAR_{i,j} = \alpha_0 + \alpha_1 X_i + \alpha_2 INSTI_i + \alpha_3 TOTAL * INSTI_i + \alpha_4 LISTED * INSTI_i + \varepsilon_{i,j}$$

The dependent variable (CAR_i) is the estimated 3-day (-1,+1) cumulative abnormal return of acquiring European firms around the announcement date of a transaction.

The X_i variable is a variable vector which incorporates both firm and transaction characteristics and includes the following variables, mainly defined as dichotomous variables: *Method of payment* (CASH), which has a value of 1 if financing is exclusively in cash; *Bidder attitude regarding the takeover* (FRIEND), which has a value of 1 if friendly; *Focus activity* (FOCUS), which has a value of 1 if the main line of business for both firms is the same two digits of the SIC code; *Acquiring firm size* (SIZE), which has a value of 1 if the firm falls within the first quartile of market capitalization at the end of the semester prior to the transaction announcement; *Target firm listing* (LISTED), which has a value of 1 if the target firm is listed on the market; *Managerial opportunism* (CFLOW), defined as cash flow between all acquiring firm assets; *Growth opportunities* (MB), approximated as the market-to-book ratio of the acquiring firm; *Relative size of the acquired firm* (RSIZE), calculated as a logarithm of the value of the transaction divided by the market value of the acquiring firm four days before the transaction; and *Acquisition of 100%* (TOTAL), which is a dummy variable that equals 1 if the bidder fully acquires the target and hence holds 100% of the share capital after completion of the deal, and equals zero otherwise.

The INSTI variable groups together variables concerning the characteristics of the legal and institutional environment of both the acquiring and the target firm, as defined in the previous section. The explanatory variables are defined as the difference in each characteristic between the acquiring and the target firm⁵: *Shareholder protection* ($DFSHARE_{BT}$), *Accounting standards* ($DFACCOUNT_{BT}$), *Creditor protection* ($DFCREDITOR_{BT}$), *Ownership concentration* ($DFOWNCONC_{BT}$), *Economic freedom* ($DFEFREEDOM_{BT}$), *Stock market*

⁵ We also consider the variable for the acquiring and the target firm separately. However, the results are not significant in this case.

capitalization ($DFMKCAP_{BT}$), *Economic development* ($DFGDP_{BT}$) and *Corruption control* ($DFCCORR_{BT}$).

5.2. *Controlling for Selection Bias*

The decision on a cross-border acquisition is an endogenous choice made by the bidding and the target firms. Rossi and Volpin (2004) find that bidders and targets from countries with high shareholder protection are more likely to be involved in domestic rather than cross-border M&As. Therefore, a bidder from a country with high shareholder protection is involved in a cross-border acquisition if the takeover synergies exceed the higher cost arising from a foreign bid. In this case there will be a positive relationship between bidder shareholder protection and the bidder firm return around the announcement date of cross-border M&As (Martynova and Renneboog, 2008). This endogeneity issue may affect our analysis.

We control for selection bias in cross-border M&As following Heckman's (1976, 1979) procedure. In the first stage we estimate a probit model to analyze the probability that a European bidder will undertake a cross-border rather than a domestic M&A. In the second stage we include Heckman's Lambda (or inverse Mill's ratio) as an additional regressor in regressions on the bidder returns to correct this potential endogeneity problem.

In the first stage we consider the following variables. The dependent variable is the probability that a European firm will take a cross-border M&A. The explanatory variables are: focus, cash flow, market-to-book ratio, bidder's size, listed target and bidder legal and institutional variables, defined in the previous section. We consider variables in relation to the legal and institutional environment sequentially, unlike Martynova and Renneboog (2008), because of the high correlation between them (table 6).

(Table 6)

The results of the probit regression are reported in table 7. In model 1 we consider shareholder protection in the bidder country ($PSHARE_B$) as a legal and institutional variable. Regarding the characteristics of the deal and firms, transactions in related industries ($FOCUS$) have a positive effect on the probability of a bidder firm being involved in a cross-border M&A (0.34). Deals between firms from the same industry reduce the asymmetric information problems. The bidder's growth opportunity (MB) has a positive influence on the probability of cross-border deals. Firms with good growth opportunities seek to operate in global markets. The bidder's size ($SIZE$) also has a positive effect. According to the legal and institutional characteristics, better shareholder protection in the bidder country ($PSHARE_B$) has a negative influence on the probability of cross-border M&As. These results support the argument that firms from countries with a weak legal and institutional environment are more likely to invest abroad rather than domestically (Doidge et al., 2007, Benos and Weisbach, 2004). In models 5 and 6, we consider the economic freedom index ($EFREEDOM_B$) and stock market capitalization ($MKCAP_B$) as a proxy for the legal and institutional environment in the bidder country. The results do not differ from previous models. However, in models 7 and 8 the better GDP per capita (GDP_{pc_B}) and corruption control ($CCORR_B$) have not influence on the probability of cross-border M&As.

(Table 7)

5.3. Results: determinants of the acquiring-firm shareholders' valuation

In this section we develop bidder return regression analysis to examine the impact of the legal and institutional environment, as well as firm and transaction characteristics, as control variables, while we control for the fact that making a cross-border acquisition is an endogenous decision (selection bias problem).

The dependent variable is the cumulative abnormal return (CAR) (-1, +1) for bidder shareholders at the cross-border M&A announcement. The explanatory variables are those described in section 5.1.

Table 8 shows the results of bidder return regression in the second stage. Model 1 considers the difference in shareholder protection between bidder and target country ($DFSHARE_{BT}$). Among the classic explanatory variables, the following are significant. The bidder's size (SIZE) has a negative effect on CAR, consistent with the argument that larger firms may overprice deals because of the lower alignment between managers and shareholders. The relative size of the target (RSIZE) has a positive effect, in line with Moeller and Schlingemann, (2005). Public target acquisition (LISTED) has a negative impact on CAR. These results are in line with the univariate analysis and support the fact that, in this type of acquisitions, potential buyer competition increases the payment price in the deal. Among the institutional variables, the difference in shareholder protection between the countries of the firms involved in the M&A ($DFSHARE_{BT}$) is not significant. In models 5-8, we consider the differences in the economic freedom index ($DFEFREEDOM_{BT}$), stock market capitalization ($DFMKCAP_{BT}$), GDP per capita ($DFGDP_{pcBT}$) and corruption control ($DFCCORR_{BT}$) as an institutional variable. The results do not differ from those in model 1.

(Table 8)

We now consider other variables that collect the discrete effect of the differences between the bidder and target legal and institutional environments using dummy variables. The first variable (BETTER) is equal to 1 when the bidder's legal and institutional variable is above the median of the target country and the target is below this median. The second one (WORSE) is defined in the inverse way. It is 1 when the bidder's environment is below the median and the target is above this median. And the third one (BOTH) is equal to 1 when

both bidder and target are above the median and zero otherwise. Table 10 (table 9 report probit regression) reports these results.

(Table 9)

(Table 10)

The classic explanatory variables have a similar effect to that in the previous models, in all the estimations. Regarding the institutional variables, in model 1, worse bidder shareholder protection ($WORSEPSHARE_{BT}$) (when the value is below the median in the bidder country and above this median in the target country) has a negative effect. In model 2, better bidder accounting standards ($BETTERACCOUNT_{BT}$) (the bidder country above the median and the target below) has a positive effect. In model 4, worse bidder economic freedom ($WORSEEFREEDOM_{BT}$) also has a negative effect. In other not reported models we consider that both firms are above the median ($BOTH_{BT}$) the effect of the institutional variables is not significant.

These results support hypothesis 1: a poorer (greater) legal and institutional environment in the target country has a positive (negative) influence on bidder shareholder return, owing to shareholder wealth expropriation in the target firm's country. All estimated models reveal that Heckman's Lambda is significant, confirming that the selection bias may induce estimation problems.

The interaction variables to test the hypotheses in relation to the more positive effect of the poorer legal and institutional environment in the target country on the bidder shareholders' return when the bidder buys all shares of the target (hypothesis 1.1) and the more negative effect of the better legal and institutional environment in the target country when the bidder buys a public firm (hypothesis 1.2) are not significant.

5.1. Robustness

We also regress the previous models for different intervals (-2,+2); (-4,+4); (-5,+5); (-20,+20) and we obtain similar results.

A model considering the influence of the interaction of cash payment (CASH) and a private target (UNLISTED) on the bidder return is also regressed. The effect of this interaction (CASH*UNLISTED) is negative and significant. So, the positive effect of cash is null when the target firm is private. This result is in line with Chang (1998), who observes the positive effect of equity payment in private target acquisitions.

6. Conclusions

This study explores the influence of the legal and institutional environment on bidder firm returns around the announcement date of cross-border Mergers and Acquisitions (M&As).

The sample includes M&As announced by European listed firms throughout 2002-2006. Target firms are listed and unlisted firms worldwide. This is a broader sample in comparison with other research studies. Another contribution of this paper is the analysis of cross-border M&As, considering characteristics of the legal and institutional environment such as shareholder protection, accounting standards, creditor protection, ownership concentration, economic freedom, stock market capitalization, corruption control and economic development.

Shareholders of bidder firms place greater value on cross-border M&A announcements than on domestic ones. Cumulative Average Abnormal Return (CAAR), in (-1,+1), is 0.99% for the whole sample, 1.38% for cross-border deals and 0.64% for domestic ones. There are significant differences in CAAR when we consider public target sub-sample (-0.21%) and private ones (1.38 %). And these differences are also significant for cross-border sub-sample.

CAAR for higher bidder sub-sample is more positive in domestic (1.17%) than in cross-border deals (0.50%) and also the CAAR for higher bidder is lower than for smaller ones (3.04%) in cross-border sub-sample.

In the univariate analysis according to the characteristics of the legal and institutional environment we only obtain significant cumulative returns for extreme differences between the bidder and the target firms' legal and institutional environments. Bidder shareholder return is higher when the bidder belongs to a better legal and institutional environment than the target. We observe this effect when we consider accounting standards, GDP per capita and the corruption control index.

Multivariate Analysis shows that the legal and institutional environment is a determinant factor in bidder shareholder M&A valuation when there are important differences between the bidder and target countries, having a negative influence when the target belongs to an environment with greater shareholder protection, less concentrated ownership, greater economic freedom or more stock market capitalization. Similarly, worse accounting standards in the target country have a positive effect on bidder shareholder valuation. These results support the univariate analysis. A better legal and institutional environment in the target country increases the transaction cost for cross-border deals. In poorer bidder environments, there are both more asymmetric information and agency problems, so the decision to acquire a foreign target is negatively valued by bidder shareholders.

These findings contribute to the literature on M&A valuation, showing the importance of a better legal and institutional environment for bidder firms when they announce cross-border M&As. They also contribute to the corporate governance literature in relation to the importance of establishing good corporate governance codes.

7. References

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Tabla 1. Geographical distribution of the mergers and acquisitions

TARGET COUNTRY	BIDDER COUNTRY																					
	All	French legal system								German legal system					Scandinavian legal system				English legal system			
	Belgium	France	Greece	Italy	Luxembourg	Netherlands	Portugal	Spain	Austria	Germany	Hungary	Poland	Switz.	Denmark	Finland	Norway	Sweden	Gibraltar	Ireland	Jersey	United Kingdom	
French legal system	100	107								46					93				223			
Belgium	6	3	1								1										1	
Egypt	1																				1	
France	29	1	17		1			2	1					1			1				3	
Greece	6			5																	1	
Italy	18		3		10			2		1											2	
Luxembourg	1																				1	
Monaco	1							1														
Netherlands	9										3							2			1	2
Panama	1																					1
Portugal	3							1	1													1
Russia Fed.	2									1												
Serbia	1																					
Spain	21		1		2																	2
Ukraine	1																					2
German legal system	52																					
Austria	2									1												1
Bulgaria	1			1																		
China	4															1						3
Czech. Rep.	1																					1
Germany	28	1	3		1	1			1	12				1		3		2				3
Hungary	1																					1
Japan	1		1																			
Poland	3							1														
Switz.	11		1		1									5								1
Scandinavian legal system	72																					
Denmark	10									1				1		5	1			1		1
Finland	14		1							1				1	5	1	4					1
Norway	17													1	2	12	1					1
Sweden	31				1			1	1					1	5	4	17					1
English legal system	245																					
Australia	8													1	1							6
Bermuda	1																					1
Canada	8					1							1				1					5
Hong Kong	1																					1
India	2																					2
Ireland	9																			6		3
Jamaica	1							1														
Malaysia	1																1					
Singapore	2		1													1						
South Africa	2																					2
United Kingdom	163	1	3					3		7					1	1	3	1	5			137
United States	46		4		2			3		5				3		1	2					22
Utd.Arab.Emirates	1																					1
Domestic	248	3	17	5	10	-	3	1	13	-	12	-	1	5	1	5	12	17	-	6	-	137
Cross-Border	221	3	19	1	8	2	6	1	15	4	17	1	-	6	7	18	14	19	1	6	1	72
All	469	6	36	6	18	2	9	2	28	4	29	1	1	11	8	23	26	36	1	12	1	209

Table 2. Descriptive Statistics

Sample of 469 M&A announcements by European listed firms, target firms being listed and non-listed firms worldwide, for completed transactions between 2002 and 2006. We distinguish: 221 cross-border and 248 domestic transactions.

The table shows the average value (as percentage, or dollars for some variables), with the standard deviation below in parentheses. Non-parametric Mann-Whitney test of differences (p value).

	All (N=469)		Cross-border (N= 221)		Domestic (N=238)		Difference Test (p value)
	mean	stand. desv.	mean	stand. desv.	mean	stand. desv.	
Cash payment (%)	0.40	(0.49)	0.46	(0.48)	0.35	(0.50)	(p=0.01**)
Equity payment (%)	0.12	(0.33)	0.08	(0.27)	0.16	(0.37)	(p=0.008***)
Mixed payment (%)	0.16	(0.36)	0.13	(0.33)	0.19	(0.39)	(p=0.08*)
Others means of payment (%)	0.32	(0.47)	0.33	(0.47)	0.31	(0.46)	(p=0.58)
Friendly (%)	0.94	(0.24)	0.92	(0.27)	0.95	(0.22)	(p=0.20)
Tender offers (%)	0.16	(0.37)	0.17	(0.38)	0.15	(0.36)	(p=0.58)
Related businesses (%)	0.61	(0.49)	0.67	(0.47)	0.54	(0.50)	(p=0.004***)
100% acquired (%)	0.94	(0.22)	0.96	(0.20)	0.94	(0.25)	(p=0.25)
Value of transactions (mil \$)	726.45	(3724.51)	942.20	(3251.16)	534.20	(4097.61)	(p=0.000***)
Relative size	0.67	(5.28)	0.36	(1.48)	0.95	(7.12)	(p=0.04**)
Total assets (mil \$)	21364.47	(119818.60)	35369.89	(163143.30)	8712.505	(54853.26)	(p=0.000***)
Cash flow to total assets	0.09	(0.16)	0.08	(0.16)	0.11	(0.15)	(p=0.21)
Market to Book	50.17	(788.83)	100.38	(1144.07)	4.82	(23.20)	(p=0.008***)
Public target (%)	0.25	(0.43)	0.29	(0.45)	0.21	(0.41)	(p=0.058*)
Private target (%)	0.53	(0.50)	0.45	(0.50)	0.61	(0.49)	(p=0.000***)
Subsidiary target (%)	0.22	(0.42)	0.27	(0.44)	0.18	(0.39)	(p=0.026**)

***, **, *: significant at the 1%, 5% and 10% level.

Table 3. Cumulative Average Abnormal Return (CAAR) for the acquiring firm around the M&A announcement

Sample of 469 M&A announcements by European listed firms, target firms being listed and unlisted firms worldwide, for completed transactions between 2002 and 2006.

Event window	CAAR %	POSITIVE	NEGATIVE	Dodd & Warner Test
0	0.49%	249	220	4.63***
(-1,+1)	0.99%	270	199	7.44***
(-2,+2)	1.39%	268	201	7.41***
(-2,+4)	1.44%	328	141	6.28***
(-4,+4)	1.58%	257	212	18.15***
(-5,+5)	1.11%	258	211	4.07***
(-10,+10)	0.67%	244	225	2.51***
(-2,0)	0.84%	250	219	4.33***
(-3,0)	0.89%	254	215	3.94***
(-4,0)	0.99%	264	205	4.05***
(-5,0)	0.75%	252	217	2.74***
(-6,0)	0.89%	246	223	3.23***
(-7,0)	0.74%	241	228	2.46**
(0,+2)	1.04%	267	202	7.92***
(0,+3)	1.03%	270	199	6.93***
(0,+4)	1.08%	259	210	6.14***
(0,+5)	0.84%	264	205	4.67***
(0,+6)	0.72%	253	216	4.06***
(0,+7)	0.69%	241	228	3.62***

***, **, *: significant at the 1%, 5% and 10% level.

Table 4. Cumulative Average Abnormal Return (CAAR) for the bidder firm according to firm and transaction characteristics

Sample of 469 M&A announcements by European listed firms, target firms being listed and unlisted firms worldwide, for completed transactions between 2002 and 2006. 248 domestic and 221 cross-border deals. Dodd and Warner T-test (1983) and the Corrado non-parametric test (1989) in parentheses below the CAAR. The test for difference is the Mann-Whitney non-parametric test.

CAAR (-1,+1)	All	Dodd- Warner	Domestic (N= 248)	Dodd- Warner	Cross-border (N= 221)	Dodd- Warner	Diff. (Domest- Cross- bord.) (p value)
<i>Panel A: All (N = 469)</i>							
CAAR	0.99%***	(7.44)	0.64%***	(5.38)	1.38%***	(5.34)	(p=0.41)
<i>Panel B: Public vs private target</i>							
Public (N=115)	-0.21%	(1.60)	-0.12%	(0.48)	-0.28%*	(1.73)	(p=0.56)
Private (N =354)	1.38%***	(9.48)	0.84%***	(6.29)	2.03%***	(7.17)	(p=0.71)
Difference	(p=0.005***)		(p=0.13)		(p=0.02**)		
<i>Panel B: Method of payment</i>							
Cash (N=188)	0.59%***	(4.69)	0.45%***	(4.49)	0.71%**	(2.25)	(p=0.16)
Shares (N =58)	-0.21%	(-0.38)	-1.10%	(-1.25)	1.75%	(a)	(p=0.40)
Difference	(p=0.21)		(p=0.13)		(p=0.97)		
<i>Panel C: Bidder's size</i>							
Higher (N=297)	0.85%***	(4.47)	1.17%***	(5.31)	0.50%	(-0.90)	(p=0.06*)
Smaller (N=172)	1.23%***	(6.41)	-0.21%*	(1.96)	3.04%***	(7.42)	(p=0.30)
Difference	(p=0.16)		(p=0.85)		(p=0.02**)		
<i>Panel D: Bidder's country</i>							
Common Law (N=223)	0.76%***	(5.12)	0.71%***	(4.81)	0.84%**	(2.28)	(p=0.23)
Civil law (N=246)	1.19%***	(5.40)	0.55%***	(2.80)	1.67%***	(4.72)	(p=0.88)
Difference	(p=0.54)		(p=0.37)		(p=0.72)		

*, **, ***: statistically significant at the 90%, 95 % and 99 % confidence level, respectively.

a: the results are not shown due to the small size of the sub-sample (Corrado test is shown in these cases).

Table 5. Cumulative Average Abnormal Return (CAAR) (-1,+1) for the acquiring firm, according to the differences in the legal and institutional environment

Sample of 221 cross-border M&A announcements by European listed firms, target firms being listed and unlisted firms worldwide, for completed transactions between 2002 and 2006. Dodd and Warner T-test (1983) and the Corrado non-parametric test (1989) included in parentheses below the CAAR. The test for difference is the Mann-Whitney non-parametric test.

<i>Panel A: Positive or negative differences between bidder and target index</i>																
CAAR (-1,+1)	Shareholder protection (N=221)		Accounting standards (N=221)		Creditor protection (N=221)		Ownership concentration (N=204)		Economic Freedom (N=221)		Stock market capitalization (N=221)		GDP per capita (N=221)		Corruption control (N=221)	
	%	t-test	%	t-test	%	t-test	%	t-test	%	t-test	%	t-test	%	t-test	%	t-test
Better in bidder country (1)	1.11***	(4.44)	1.87***	(6.11)	1.13***	(4.46)	0.76**	(2.41)	1.22***	(4.32)	0.51**	(2.26)	2.01***	(6.18)	1.37***	(4.24)
Worse in bidder country (3)	1.83***	(2.65)	0.34	(0.27)	1.79***	(2.64)	2.02***	(5.01)	1.51***	(2.99)	0.65	(0.94)	0.60	(0.83)	1.38***	(2.93)
Difference (p value)	(p=0.96)		(p=0.36)		(p=0.84)		(p=0.85)		(p=0.45)		(p=0.65)		(p=0.25)		(p=0.46)	
<i>Panel B: Bidder index is above (below) and target index is below (above) according to the median of target index</i>																
CAAR (-1,+1)	Shareholder protection (N=108)		Accounting standards (N=40)		Creditor protection (N=120)		Ownership concentration (N=79)		Economic Freedom (N=83)		Stock market capitalization (N=111)		GDP per capita (N=91)		Corruption control (N=93)	
	%	t-test	%	t-test	%	t-test	%	t-test	%	t-test	%	t-test	%	t-test	%	t-test
Better in bidder country (1)	0.78*	(1.71)	3.08***	a	0.69*	(1.81)	-0.57*	(-1.93)	0.42	(0.78)	0.43	(0.76)	1.78***	(4.72)	1.69***	(3.57)
Worse in bidder country (3)	-0.69**	(-2.19)	0.25	a	1.94***	(3.24)	0.36	(1.01)	-0.48	(-1.59)	-0.42*	(-1.71)	-0.71	(-1.41)	-0.01	a
Difference (p value)	(p=0.20)		(p=0.07*)		(p=0.12)		(p=0.41)		(p=0.45)		(p=0.58)		(p=0.05*)		(p=0.06*)	

*, **, ***: statistically significant at the 90%, 95 % and 99 % confidence level, respectively. a: the results are not shown due to the small size of the sub-sample (Corrado test is used in these cases).

Table 6. Correlation matrix

The sample consists of 221 cross-border M&A announcements by European listed firms (2002-2006). The variables of the legal and institutional environments are defined as the difference in each characteristic between acquiring and the target firm: *Shareholder protection* (DFSHARE_{BT}), *Accounting standards* (DFACCOUNT_{BT}), *Creditor protection* (DFCREDITOR_{BT}), *Ownership concentration* (DFOWNCONC_{BT}), *Economic freedom* (DFEFREEDOM_{BT}), *Stock market capitalization* (DFMKCAP_{BT}), *Economic development* (DFGDP_{BT}) and *Corruption control* (DFCORR_{BT})

VARIABLES	DFSHARE _{BT}	DFACCOUNT _{BT}	DFCREDITOR _{BT}	DFOWNCON _{BT}	DFEFREEDOM _{BT}	DFMKCAP _{BT}	DGDP _{pc BT}	DFCORR _{BT}
DFSHARE _{BT}	1.000							
DFACCOUNT _{BT}	0.6288***	1.000						
DFCREDITOR _{BT}	0.7847***	0.5421***	1.000					
DFOWNCONC _{BT}	-0.3543***	-0.3305***	-0.2562***	1.000				
DFEFREEDOM _{BT}	0.6593***	0.5129***	0.5086***	-0.0855	1.000			
DFMKCAP _{BT}	0.2491***	0.3239***	0.1203*	-0.3898***	0.2720***	1.000		
DGDP _{pc BT}	0.4766***	0.3452***	0.2575***	-0.2150***	0.5325***	0.1989***	1.000	
DFCORR _{BT}	0.7998***	0.6147***	0.5399***	-0.2441***	0.6206***	0.2491***	0.6400***	1.000

***, **, *: significant at the 1%, 5% and 10% level.

Table 7. Probability of the bidder firm participating in a cross-border transaction

Heckman sample selection models. Dependent variable: the probability that a bidder firm announces a cross-border M&A. Explanatory variables: legal and institutional environment and control variables. The sample consists of 221 cross-border M&A announcements by European listed firms (2002-2006).

	(1)	(2)	(...)	(5)	(6)	(7)	(8)
<i>Panel A: Deal and firm characteristics</i>							
FOCUS	0.3427***	0.3735***	...	0.3287**	0.3539***	0.3171**	0.3122**
CFLOW	0.4158	0.5279	...	0.3937	0.4806	0.3110	0.3048
MB	0.0044**	0.0044**	...	0.0045**	0.0046***	0.0041**	0.0040**
SIZE	0.3201**	0.3377**	...	0.3339**	0.3669**	0.3313**	0.3341**
LISTED	0.1012	0.1057	...	0.1073	0.1216	0.1535	0.1606
<i>Panel B: Legal and institutional characteristics</i>							
PSHARE _B	-0.0749**		...				
ACCOUNT _B		-0.0211**	...				
PCREDITOR _B			...				
OWNCONC _B			...				
EFREEDOM _B			...	-0.0272***			
MKCAP _B			...		-0.4861***		
GDP _{pcB}			...			0.0005	
CCORR _B			...				0.1592
YEARS	YES	YES		YES	YES	YES	YES
Observations	447	432		448	448	448	448
Prob>F	0.0020	0.0030		0.0008	0.0004	0.0047	0.0022
Wald chi	47.40	46.04		50.42	52.37	44.39	47.14

***, **, *: significant at the 1%, 5% and 10% level.

Table 8. Determinants of Bidder Abnormal Returns: Cross-border transaction

Least square regressions. Dependent variable: cumulative abnormal return in the event window (-1,+1).
 Explanatory variables: legal and institutional environment and control variables. The sample consists of 221
 cross-border M&A announcements by European listed firms (2002-2006).

	(1)	(2)	(...)	(5)	(6)	(7)	(8)
<i>Panel A: Deal and firm characteristics</i>							
CASH	-0.0007	-0.0036	...	-0.0001	-0.0017	-0.046	-0.0032
FRIEND	-0.0125	-0.0141	...	0.0129	-0.0136	-0.0063	-0.0100
FOCUS	-0.0093	-0.0065	...	-0.0107	-0.0080	-0.0178	-0.0142
CFLOW	-0.0125	-0.0063	...	-0.0120	-0.0123	-0.0168	-0.0137
MB	-0.0000	-0.0000	...	-0.0000	-0.0000	-0.0000	-0.0000
SIZE	-0.0299*	-0.0259*	...	-0.0295**	-0.0303**	-0.0358*	-0.0324*
RSIZE	0.0043*	0.0037	...	0.0040*	0.0036	0.0054**	0.0047*
LISTED	-0.0282**	-0.0265*	...	-0.0281**	-0.0248*	-0.0317*	-0.0332**
TOTAL	-0.0088	-0.0094	...	0.0009	-0.0012	0.0029	-0.0009
<i>Panel B: Legal and institutional characteristics</i>							
DFSHARE _{BT}	0.0017		...				
DFACCOUNT _{BT}		0.0002	...				
DFPCREDITOR _{BT}			...				
DFOWNCONC _{BT}			...				
DFEFREEDOM _{BT}			...	0.0003			
DFMKCAP _{BT}			...		0.0149		
DFGDP _{PCBT}			...			0.0000	
DFCCORR _{BT}			...				-0.0009
YEARS	YES	YES		YES	YES	YES	YES
Observations	210	202		211	211	211	211
Prob>F	0.0020	0.0030		0.0008	0.0004	0.0047	0.0022
Wald chi	47.40	46.04		50.42	53.37	44.39	47.14
Lambda	-0.0741*	-0.0531		-0.0763**	-0.0689**	-0.1101*	-0.0992*

***, **, *: significant at the 1%, 5% and 10% level.

Table 9. Probability of the bidder firm participating in a cross-border transaction

Heckman sample selection models. Dependent variable: the probability that a bidder firm announces a cross-border M&A. Explanatory variables: legal and institutional environment and control variables. The sample consists of 221 cross-border M&A announcements by European listed firms (2002-2006).

	(1)	(2)	(3)	(4)	(5)
<i>Panel A: Deal and firm characteristics</i>					
FOCUS	0.3273**	0.3453**	0.3603***	0.3077**	0.3462***
CFLOW	0.3877	0.5805	0.5341	0.4129	0.5004
MB	0.0044**	0.0045**	0.0048***	0.0045**	0.0046***
SIZE	0.3435**	0.3162**	0.3435**	0.3472**	0.3745**
LISTED	0.1097	0.1563	0.0846	0.1037	0.1088
<i>Panel B: Legal and institutional characteristics</i>					
PSHARE _B	-0.0741**				
ACCOUNT _B		-0.0199**			
OWNCONC _B			1.9731***		
EFREEDOM _B				-0.0265***	
MKCAP _B					-0.4910***
YEARS					
Observations	444	411	426	443	446
Prob>F	0.0009	0.0013	0.0011	0.0003	0.0002
Wald chi	49.93	48.78	49.38	53.44	55.47

***, **, *: significant at the 1%, 5% and 10% level.

Table 10. Determinants of Bidder Abnormal Returns: Cross-border transaction

Least square regressions. Dependent variable: cumulative abnormal return in the event window (-1,+1).
 Explanatory variables: legal and institutional environment and control variables. The sample consists of 221 cross-border M&A announcements by European listed firms (2002-2006).

	(1)	(2)	(3)	(4)	(5)
<i>Panel A: Deal and firm characteristics</i>					
CASH	-0.0039	-0.0058	-0.0043	-0.0026	-0.0007
FRIEND	-0.0113	-0.0092	-0.0079	-0.0076	-0.0078
FOCUS	-0.0055	-0.0106	-0.0102	-0.0129	-0.0096
CFLOW	-0.0084	-0.0033	-0.0118	-0.0195	-0.0119
MB	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000
SIZE	-0.0312**	-0.0368**	-0.0314**	-0.0343**	-0.0322**
RSIZE	0.0038	0.0053	0.0041	0.0043*	0.0039*
LISTED	-0.0239*	-0.0342**	-0.0210	-0.0204	-0.0208
TOTAL	-0.0051	0.0034	-0.0014	0.0101	0.0009
<i>Panel B: Legal and institutional characteristics</i>					
WORSESHARE _{BT}	-0.0269**				
BETTERACCOUNT _{BT}		0.0481**			
BETTEROWNCONC _{BT}			-0.0246*		
WORSEEFREEDOM _{BT}				-0.0288**	
WORSEMKCAP _{BT}					-0.0279**
YEARS					
Observations	207	181	190	206	209
Prob>F	0.0009	0.0013	0.0011	0.0003	0.0002
Wald chi	49.93	48.78	49.38	53.44	55.47
Lambda	-0.0651*	-0.0883**	-0.0703**	-0.0861**	-0.0691**

***, **, *: significant at the 1%, 5% and 10% level.