

ACQUISITION OF LISTED VS UNLISTED FIRMS: DETERMINANTS IN DIFFERENT LEGAL AND INSTITUTIONAL ENVIRONMENTS

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Abstract

Acquiring firm shareholders place greater value on the purchase of unlisted firms (2.71%) than listed ones (0.59%) for Mergers and Acquisitions (M&As) performed by European listed firms from 2002 to 2007.

Managerial opportunism is a determinant in the acquisition of listed firms, occurring with greater probability in countries in which acquiring firm shareholders receive less protection. Another determinant is information asymmetry, which favors a discount in the price of acquisitions of unlisted firms. In line with this result, the less developed the capital market in the country of the acquired firm, the greater the probability of acquisitions of listed firms.

Key Words: Mergers and acquisitions (M&As), unlisted target firm, managerial opportunism, information asymmetry, legal and institutional environment.

JEL Codes: G30; G32; G34; F30.

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INTRODUCTION

The purpose of this study is to analyze the decision to acquire unlisted firms rather than listed firms in different legal and institutional environments.

The background to this study is empirical research that shows that the shareholders of listed firms generally place greater value on the acquisition of unlisted firms. As shown in Table 1, significant rises in the share price of about one point five percent can be noted when the acquisition of unlisted firms is announced, whereas announcements of acquisitions of listed firms are negatively valued, generally causing significant drops in the share price of about minus one percent (Fuller, Netter and Stegemoller, 2002; Moeller, Schilingemann and Stulz, 2004; Draper and Paudyal, 2006; Faccio, McConnell and Stolin, 2006; Capron and Shen, 2007).

Insert Table 1 here

Starting from this background, we pose the following research questions:

1. What are the determinants of a firm when deciding to acquire a listed or an unlisted firm?
2. Is the legal and institutional environment relevant?

The main motivation for this research is that unlisted firms have relevant differences regarding liquidity, corporate control, asymmetric information, agency conflicts, negotiating power, and potential private benefits for shareholders. Therefore, the determinants of the decision to acquire an unlisted firm may be different from those in an acquisition of a listed firm. The conclusions of research focused on studying acquisitions between listed firms are not necessarily applicable to unlisted firms acquisitions.

Moreover, there has been little research on the acquisition of unlisted firms even though this is relevant in quantitative terms. Studies on merger and acquisition decisions, from the point of view of Financial Economics, have mainly focused on analyzing operations between listed companies. However, about seventy-five percent of M&As performed by listed companies, in both Europe and the USA, involve unlisted firms. In fact, the few studies examining the differences between M&As of listed and unlisted firms mainly focus on the United States (Chang, 1998; Fuller *et al.*, 2002; Moeller *et al.*, 2004), except for one on the United Kingdom (Draper and Paudyal, 2006), one on six European countries (Faccio *et al.*, 2006) and one that considers the USA, UK and France together (Capron and Shen, 2007). Most of them also analyze domestic operations, that is, M&As inside the acquirer's country. However, the legal and institutional environment may also lead to differences in the characteristics of firms, in operations and in the actual negotiation processes, thus affecting the decision and shareholders' valuations.

We develop the following arguments explaining the acquisition of unlisted, as opposed to listed firms:

- a) The relevance of managerial opportunism and different negotiation processes to acquire listed and unlisted firms, which tend to favor payment of a premium in the acquisition of listed firms.
- b) The relevance of information asymmetry as a determinant for lower prices, or "discounts", in the selling price of unlisted firms linked to their more limited negotiating power.
- c) We also consider that the characteristics of the legal and institutional environment may determine both the possibility that the managers of acquiring firms may take opportunistic decisions and the asymmetry of information, liquidity and access to

funding of acquired firms. All this may affect acquisition decisions and shareholders' valuations.

We take into account that the choice of acquiring a listed or unlisted firm may not be random but may depend on firm and environment characteristics.

The paper is structured as follows: Firstly, we give the theoretical arguments and pose the explanatory hypotheses for the decision to acquire a listed or unlisted firm, regarding managerial opportunism, information asymmetry and the legal and institutional environment. We then present the database on which the hypotheses are tested and analyze the determinants of the decision to acquire unlisted firms. Finally, we draw some conclusions.

MANAGERIAL OPPORTUNISM, NEGOTIATION PROCESS AND OVERPAYMENT IN THE ACQUISITION OF LISTED FIRMS

Managers' opportunism and "hubris" may lead them to prefer to acquire a listed firm, even if the price of the deal is excessive. Other factors leading to such overpayments, or premiums, are competition to acquire listed firms and "free-riding" by shareholders.

Managerial opportunism and "hubris"

Managers carrying out an M&A may be motivated to create value for their shareholders or may pursue their own interests, obtaining private benefits from the deal. Such private benefits for the managers of the acquiring firm are positively related to the size and prestige of the acquired firm (Aggarwal and Samwick, 2003). Managers will prefer to pay a higher price and buy a large and prestigious firm, if they pursue personal interests and private benefits. In general, listed firms are larger and more prestigious than unlisted firms, so greater managerial opportunism can be expected in the acquisition of listed firms. Conversely, the motivation behind the acquisition of unlisted firms is more

likely to be to create value for shareholders. Therefore, the payment of an excessive price for the acquisition is less likely.

Opportunism may also go together with excessive “hubris” of managers, who overestimate their capability to improve the management of the target firm (Roll, 1986). This may lead to payment of a premium for the target firm.

Managerial opportunism and “hubris” may lead managers to pay a higher price, that is, a premium, to acquire firms that might benefit their private interests. Shareholders will therefore value M&A negatively if they consider that managers will pay an excessive price for the target firm (Moeller *et al.*, 2004; Faccio *et al.*, 2006). On the contrary, shareholders will value the announcement of the M&A positively if they consider it creates value.

Negotiation process: the “winner’s curse”

The negotiation process for an acquisition involves relevant differences depending on whether the acquired firm is listed or not. Corporate governance mechanisms in listed firms pressure their managers to encourage competition amongst potential bidders in order to get a better price for their shareholders (Schwert, 1996; Goergen and Renneboog, 2004). Therefore, the sale of listed firms is more likely to follow an auction process in order to attract a larger number of potential bidders, who would be competing to gain control (Milgrom, 1987).

Competition amongst multiple bidders may lead to the “winner’s curse” (Roll, 1986). Shareholders of the acquired firms will accept the best offer. Competition will raise the bid prices, especially when managers’ decisions are partly guided by their “hubris”, making them pay in excess for the acquisition. Thus, competition amongst bidders encourages payment of a premium (Jensen and Ruback, 1983).

Unlisted firms will generally be sold in direct negotiations between the firms involved in the M&A, based on the free will of both parties (Koeplin, Sarin, and Shapiro, 2000). Although unlisted firms may create an auction process, they do not usually do so, because they have neither the financial resources needed nor contacts with investment intermediaries (Capron and Shen, 2007). In addition, they may prefer to carry out negotiations with a specific potential buyer who may, for example, offer more guarantees regarding continuity of the firm's activity or its workers, or may just be more in line with the firm's culture, instead of generating a competitive process to maximize the price paid (Graebner and Eisenhardt, 2004). The larger information asymmetries in these cases raise the costs of information for acquiring firms, reducing competition. Such processes would involve little or no competition amongst bidders, and little or no publicity would be given to them.

Free riding

The acquisition of listed firms also promotes free-riding (Grossman and Hart, 1980). The acquired firm's shareholders will be more reluctant to sell their shares if they consider the operation will be successful. So the market value of shares will be higher at the end of the acquisition process. Therefore, the price paid by the acquirers will be higher and may even involve transfers of wealth from the acquiring firm shareholders to those of the target firms.

Thus, opportunism may lead managers to acquire listed firms, even if the negotiation processes lead them to pay a premium for such operations. We therefore pose the following hypothesis:

Hypothesis 1 (managerial opportunism): Managerial opportunism promotes the acquisition of listed firms.

INFORMATION ASYMMETRY: DISCOUNT IN THE ACQUISITION OF UNLISTED FIRMS

In the above section, we give arguments to explain why there may be a premium in the acquisition of listed firms and, therefore, why acquiring firm shareholders value such operations negatively. In this section, we explore the determinants of acquiring unlisted firms, giving additional arguments for the positive valuation of the acquisition of unlisted firms, based on the discount expected in the price paid by the acquiring firm shareholders. We expect M&As to be valued positively by the acquiring shareholders whether or not the price paid for the unlisted target firm benefits the acquiring firm. Koeplin, Sarin and Shapiro (2000) estimate the discount in the acquisition of unlisted firms at eighteen to thirty percent, Kooli, Koratas and L'Her (2003) at twenty to thirty-four percent and Officer (2007) at fifteen to thirty percent.

The discount in the price to acquire unlisted firms is associated with their lesser transparency and liquidity, greater information asymmetry, less market visibility and absence of a share market price, all of which reduce their negotiating power in the selling process.

Less market liquidity

The market for acquiring unlisted firms is less liquid than that for listed firms. It is more difficult to buy or sell an unlisted firm. This increases the negotiating power of the acquiring firm. Acquired firms will accept lower prices for selling their shares in less liquid markets (Officer, 2007).

Conversely, listed firms will generally have more potential buyers and will have the market itself on which individual shareholders can sell their shares (Capron and Shen, 2007).

Less business liquidity

Firms' liquidity problems and their difficulties for obtaining funding may lead them to sell up, and in the case of groups to sell off a subsidiary.

The negotiating power of unlisted firms will be lower the greater the firm's need for liquidity and the greater the difficulties involved in obtaining funding. Faccio *et al.* (2006) conclude that the determinants of shareholders' valuation when the acquired firm is not listed are the same whether the firm sold is an individual firm or a subsidiary in a group.

Information asymmetry on the firm's value

Information on target firms is generally more limited when they are not listed. However, listed firms are under the scrutiny of the stock market. Once firms are listed on the stock exchange, regulations require them to issue more information and to be more transparent. They are also examined by financial analysts. All this reduces uncertainty about their value (Capron and Shen, 2007). In fact, the firm's share price is a continuous reference for potential buyers, helping them set a value for a possible bid. On the other hand, in unlisted firms managers have more control over the information they decide to transmit to the markets (Reuer and Ragozzino, 2008).

The managers of acquiring firms will generally have less information on potential target firms if these are not listed. This information asymmetry increases the risk of not valuing the firm's assets accurately (Reuer and Ragozzino, 2008). Therefore, in order to avoid "adverse selection" (Akerlof, 1970), the acquiring firm shareholders will reduce the price paid for unlisted firms.

The information asymmetry will be smaller if buyer and seller firms have had previous trading relations. Then, moreover, the acquired firms will have greater incentives to be more transparent and to provide relevant private information to be evaluated by the

acquiring firm's managers. This may mitigate the negative consequences of adverse selection and allow a higher price for the operation.

However, the information asymmetry that characterizes unlisted firms generates advantages for acquirers holding private information. It may allow them to obtain extraordinary gains, by demanding a discount in the price the acquired firm would have to accept in the case of a higher information asymmetry (Makadok and Barney, 2001). So, information asymmetry generates investment opportunities for firms holding more information, allowing them to make acquisitions that will create value.

Less transparency and less complete accounting information

The markets demand more complete accounting and financial information on listed firms than unlisted firms, even if they are covered by similar regulations (Ball and Shivakumar, 2005). On the other hand, unlisted firms may not be required at all to perform accounting audits.

The accounting information drawn up by unlisted firms is more likely to be oriented towards internal use, for tax purposes, for decision-making and as information for their shareholders, rather than for transmitting information to creditors, potential investors and other outside agents. Moreover, financial relations with creditors are usually private for unlisted firms, going through financial intermediaries rather than debt issue in the market. Also, unlisted firms usually have more concentrated ownership, which makes it less necessary for financial statements to serve as a control mechanism in management decisions.

The lesser transparency of unlisted firms' financial statements leads to greater information asymmetry, which will bring down the prices bid by potential acquirers, in order to avoid the consequences of adverse selection.

The possible premium in the acquisition of listed firms and the discount in the acquisition of unlisted ones beg the question as to why listed firms are acquired, since it seems more efficient for acquirers to buy unlisted firms. In spite of everything stated above, it may be optimal for acquiring firm shareholders to acquire a listed firm. We would expect an acquirer to avoid buying an unlisted firm when there is excessive information asymmetry even though such asymmetry is likely to lead to a discount in the price paid. However, the bidder may consider the information asymmetry to be excessive and will prefer to avoid the deal altogether rather than demand a greater discount.

Therefore, the acquisition of unlisted firms leads to discounts in the price paid, in line with such firms' and their markets' lesser liquidity and the information asymmetry. However, in cases in which the information asymmetry for the acquirer is very high, the managers will prefer to buy listed firms. We therefore pose the following hypothesis:

Hypothesis 2 (information asymmetry): Information asymmetry regarding unlisted firms promotes their acquisition, except when the acquirer firm considers such information asymmetry to be excessive.

RELEVANCE OF THE LEGAL AND INSTITUTIONAL ENVIRONMENT

Opportunism may determine managers' interest in acquiring listed firms. Moreover, the information asymmetry of unlisted firms generates opportunities for acquisitions that create value for acquiring firms, because of the lower prices that they expect to pay. We suggest that the relevance of managerial opportunism and of information asymmetries may depend on the characteristics of the legal and institutional environment. We believe that there have been no studies on these aspects.

We expect managers to take more opportunistic decisions in countries characterized by a weak legal and institutional environment, in that there is less shareholder protection. If the acquisition of listed firms is linked to “hubris” and managers’ private interests, the probability of listed firm acquisitions would be higher in countries with less shareholder protection. The acquisition of listed firms may allow managers to “build empires” and draw private benefits from shareholders (Draper and Paudyal, 2006). We therefore pose the following hypothesis:

Hypothesis 3 (environment of acquiring firm): The probability of acquiring unlisted firms will be smaller the worse the shareholder protection in the acquiring firm’s country.

In addition, the price paid in the transaction will be lower in the cases of target firms with less liquidity available, more difficulties to access funding and more information asymmetry. Underdeveloped financial markets in the acquired firms’ country will mean that unlisted firms face greater difficulties for obtaining finance and have less liquidity when selling their firms. Such circumstances promote the sale of unlisted firms, which will accept greater discounts in the selling price. Lower prices may increase the number of potential bidders. In countries with higher costs and difficulties for accessing external finance, unlisted firms are more likely to be placed on sale, as a means of obtaining liquidity. Therefore, the probability of acquiring unlisted firms will be higher in countries in which the financial markets are less developed and accounting standards are weaker.

A country’s capital market development is correlated to the quality of its institutions (La Porta, López de Silanes, Shleifer and Vishny, 1998). And the quality of institutions is directly related to the quality and reliability of firms’ financial statements.

We propose the following hypothesis:

Hypothesis 4 (environment of acquired firm): The worse the development of capital markets and the accounting standards in a country, the more probable it is that unlisted firms in it will be acquired.

We therefore aim to analyze whether the legal and institutional environment determines the type of firms acquired.

DATABASE

The database collected to test the above hypotheses covers mergers and acquisitions (M&As) announced by European listed non-financial firms during the period 2002-2007. Target firms may be either listed or unlisted anywhere in the world. Financial firms (SIC code 6000 to 6999) were excluded because the regulation on mergers and acquisitions distinguishes them from non-financial ones (Travlos, 1987; Fuller *et al.*, 2002; Moeller *et al.*, 2004; Campa and Hernando, 2004; Martynova and Renneboog, 2008, 2009; Kuipers *et al.*, 2009).

The sources of information are the *Thomson One Banker M&A database*, *Datastream*, *Lexis Nexis* and *Amadeus*. The characteristics of the firms and the M&As come from the *Thomson One Banker M&A database*. *Datastream* provided the time series of acquiring firms' share prices which were taken as the basis for calculating abnormal returns around the M&A announcement. *Lexis Nexis* was used to check the announcement date. This database gives information from the world financial press and specialist journals and from firms' websites. The information on acquiring firm ownership structure was obtained from the *Amadeus (Bureau Van Dijk)* and *Datastream* databases.

The database analyzed includes M&As announced by European listed firms between 1 January 2002 and 31 December 2007, which were actually completed and which led to a change of control in the acquired firm, with the acquirer firm taking more than fifty

percent of its ownership. The average stake of the acquiring firm after the acquisition is ninety-seven point twenty-five percent, although in most of the M&As the whole firm was acquired.

The period analyzed is characterized by restructuring of the telecommunications sector and regulatory changes in corporate governance systems in most countries. There is also an increase in transnational M&As and acquisitions of unlisted firms. Gregoriou and Renneboog (2007) call this period, which came after the “*dotcom*” crisis, the “sixth wave” of mergers and acquisitions.

In order to standardize the information, the following operations were eliminated:

- (i) M&As when the acquiring firm issued more than one announcement in the interval considered the event “window”, so the acquisition announcement coincided with another relevant event (Campbell, Lo and MacKinlay, 1997, p. 151);
- (ii) M&As for which there is no data on the percentage of ownership of the majority shareholder in the acquiring firm, or in which is not possible to identify the type of shareholder involved.

The final sample consists of 447 M&As in 32 countries and 56 industries (2-digit SIC codes), after eliminating the above-mentioned transactions. Twenty-five percent of the acquisitions are between listed firms but 334 operations (75%) involve the acquisition of unlisted firms. These percentages are similar to those observed in other research for other geographical areas. In the United Kingdom, the acquisition of unlisted firms by listed firms accounts for eighty percent of the deals (Draper and Paudyal, 2006). In the United States, the percentage is sixty to seventy-five percent (Capron and Shen, 2007).

Valuation of acquisitions of unlisted firms

We estimated abnormal returns for the acquiring firm shareholders around the M&A announcement, following event study methodology (Brown and Warner, 1985) in order to show acquiring shareholders' valuations of decisions to acquire an unlisted firm as opposed to a listed firm.

The M&A announcement dates are identified in the *Thomson One Banker* database and checked with those given by *Lexis Nexis*. Any operations in which the information does not tally is eliminated. The abnormal returns for each firm (AR_{it}) is calculated around a "window" of 20 days before and 20 days after the announcement (-20,+20), as the difference between the actual returns obtained every day (adjusted for dividends, subscription rights and splits) and the expected returns according to the market model, taking a reference period of -200 to -21 days prior to the announcement and the "local index" as the reference for market profitability. Comparison of the significance of the daily abnormal returns and the cumulative returns are performed using the statistical test proposed by Dodd and Warner (1983) and, for small sub-samples, the non-parametric statistical test by Corrado (1989).

Table 2 shows the cumulative abnormal returns obtained by acquiring firm shareholders around the M&A announcement, according to whether the acquired firm is listed or not. The cumulative abnormal returns obtained by the acquiring firm shareholders, in the interval of (-2,+2) days around the announcement, are, on average, lower for the acquisition of listed firms (0.59%) than for unlisted ones (2.71%). The difference is statistically significant.

These results are consistent with previous studies by Fuller *et al.* (2002), Moeller *et al.* (2004), Faccio *et al.* (2006), Draper and Paudyal (2006), Capron and Shen (2007) (see Table 1).

Table 2 also shows average abnormal returns around the M&A announcement according to the payment method used in the transaction. Acquiring firms' shareholders obtain greater returns in the acquisition of listed firms if the M&A payment method is in cash (1.46%). When payment is with stocks, the abnormal returns are not significantly different from zero. The acquiring shareholders also obtain higher abnormal returns in the acquisition of unlisted firms paid for with cash, instead of stocks, although the difference between the returns is not statistically significant.

 Insert Table 2 here

DETERMINANTS OF THE DECISION TO ACQUIRE UNLISTED FIRMS

We analyze the determinants of the decision to acquire a listed or an unlisted firm. We estimate a probit model in order to test the hypotheses, regarding the relevance of managerial opportunism, information asymmetry, and the legal and institutional environment. The econometric model proposed is as follows:

$$\begin{aligned}
 \text{Probability (unlisted target firm)}_i = & \alpha_0 + \alpha_1 \text{Managerial opportunism}_i + \\
 & + \alpha_2 \text{Information Asymmetry}_i + \\
 & + \alpha_3 \text{Legal and Institutional Environment}_i + \\
 & + \alpha_4 \text{Control Variables}_i + \\
 & + \alpha_5 \text{Industry, Country and Year Dummies}_i + \\
 & + \text{Error}_{ij}
 \end{aligned}$$

where:

Managerial Opportunism = f(size of acquiring firm, ownership of the majority shareholder in the acquiring firm, acquiring firm cash-flow, acquiring firm market-to-book, method of payment)

Information Asymmetry = f(relative size of acquired firm, prior participation by acquiring firm, diversified M&A, cross-border M&A)

Legal and Institutional Environment = f(shareholder protection in acquiring firm country, minority shareholder protection in acquiring firm country, market capitalization in acquired firm country, creditor protection in acquired firm country)

Control Variables = f(acquiring firm leverage, tangible assets acquiring firm)

The dependent variable is defined as a dummy variable taking value one if the acquired firm is unlisted and zero if it is listed.

The explanatory variables represent the relevance of managerial opportunism, information asymmetry, and the legal and institutional environment, and also include control variables. These variables are defined below as are the expected relations between them, in line with the above hypotheses.

Managerial opportunism

The relevance of managerial opportunism is estimated on the basis of the following variables: acquiring firm size, ownership concentration, cash-flow and market-to-book ratio and method of payment.

Acquiring firm size

Managerial opportunism and “hubris” may have more influence on larger firms (Demsetz and Lehn, 1985). Acquiring firm managers pursuing to increase the size of the firm in order to create “empire buildings” and increase their prestige, instead of maximizing shareholder value, will prefer to acquire listed firms instead of unlisted ones (Moeller *et al.* 2004).

We expect the probability of acquiring a listed firm to be higher the larger the acquiring firm. The variable we define to represent acquiring firm size is a dummy taking value

one if the acquiring firm is in the first quartile of market capitalization in the stock exchange of its country and zero otherwise (Moeller *et al.*, 2004).

Ownership structure of the acquiring firm

The ownership structure of the acquiring firm might influence the relevance of managerial opportunism. In firms with dispersed ownership, managers will have greater opportunities to pursue their objectives through M&As than when ownership is more concentrated. Managers of firms with more dispersed ownership are more likely to undertake opportunistic acquisition decisions, in order to create a larger business group, rather than maximizing value creation. Therefore, we would expect managers of firms with a dispersed ownership structure to acquire more listed firms, which offer them greater possibilities of obtaining private benefits.

We define the ownership variable as the percentage of direct and indirect ownership and voting rights held by the majority shareholder, according to the firm's last annual report prior to the operation (Source: *Amadeus Bureau Van Dijk Database*). Therefore, we consider control rights, checking for the possible existence of several types of share, pyramidal structures, control chains and cross-holdings.

We expect less opportunistic behavior from managers if the acquiring firm ownership structure is concentrated. Conversely, managerial opportunism and "hubris" will lead to a preference for the acquisition of unlisted firms in which shareholders have less control and in which their control is less effective.

Cash-Flow and Market-to-Book

The relevance of managerial opportunism depending on the firm's circumstances is represented by the cash-flow and market-to-book variables. We assume that acquiring

firms will undertake fewer M&As to create “empire buildings” the lower their free cash flow and their market-to-book ratio (Jensen, 1986).

The cash-flow variable is defined as the EBITDA divided by the acquiring firm’s total assets at the end of the year before the M&A (Moeller *et al.*, 2004). The market-to-book ratio divides the acquiring firm’s market capitalization value plus total debt by its total assets, at the end of the year before the deal (Moeller *et al.*, 2004; Dong, Hirshleifer, Richardson and Teoh, 2006).

Method of payment

Research on M&As usually notes a negative acquiring shareholders valuation of M&As paid for with stocks when the acquired firm is listed. Explanations of this negative valuation are based on the information asymmetry hypothesis drawn up by Myers and Majluf (1984). When a firm issues shares, this is interpreted by its shareholders as signaling overvaluation in the market, so the announcement of new share issues generally leads to a drop in the share price.

When acquisitions of unlisted firms are analyzed, differences are noted in the valuation made by the acquiring firm shareholders, depending on the method of payment used, unlike what happens when the acquired firm is listed (Chang, 1998; Fuller *et al.*, 2002; Moeller *et al.* 2004; Draper and Paudyal, 2006; Faccio *et al.*, 2006; Capron *et al.*, 2007).

The worst valuation by the acquiring firm shareholders is when a listed firm is acquired and paid for with stock, resulting on average abnormal returns of about minus two percent, irrespective of the size of the firms (Fuller *et al.*, 2002). Conversely, M&As paid for with stock result in a better valuation by acquiring firm shareholders when an unlisted firm is acquired, with average abnormal returns around the announcement of two point five percent. The acquisition of unlisted firms is also positively valued when the M&A is paid for in cash, with studies showing average abnormal returns of about

one point five percent. When the acquisition of a listed firm is paid for in cash, the average abnormal returns are not significant.

The greater the uncertainty or information asymmetry of the acquired firm, the more likely it is that the M&A will be paid for with stock (Martin, 1996). The information asymmetry of the acquired firm may be reduced if the M&A is paid for with stock (Hansen, 1987), given that both firms share the risks involved in the transaction (Officer, Poulsen and Stegemoller, 2009). Therefore, the negative valuation made by acquiring firm shareholders when the M&A is paid for with stock, which is associated with the overvaluation signal, may become positive if the firm being acquired is unlisted (Fuller *et al.*, 2002).

Moreover, agency costs between shareholders and managers may be lower in the acquisition of unlisted firms paid for with stock. They may be also lower if the acquiring firm has a majority shareholder having effective managerial monitoring. Concentrated ownership structures are more frequent amongst unlisted firms, which are often controlled by members of a single family or by a small group of majority shareholders. Therefore, the acquisition of unlisted firms paid for with stock is likely to involve the entry of a new blockholder in the acquiring firm. The stock payment will lead the new shareholders in the acquired firm to have a relevant stake in the acquiring firm, leading to greater control over the managers (Chang, 1998; Fuller *et al.*, 2002; Moeller *et al.*, 2004). This expectation is positively valued by acquiring firm shareholders.

Therefore, acquisitions of unlisted firms paid for with stocks will be less probable when the transaction is motivated by managerial opportunism. Managers who make an acquisition for opportunistic reasons will try to avoid the entry of a group of

shareholders from the unlisted firm. We therefore expect the probability of acquiring unlisted firms to be lower when the M&A is paid for with stock.

We define three dummy variables taking the value of one if the operation is paid for with stock, with cash or with stock and cash, and zero otherwise.

Information asymmetry

Information asymmetry as a determinant of the decision to acquire listed or unlisted firms can be proxied by the relative size of the firms involved in the operation, the previous stake of the acquiring firm in the acquired firm ownership structure, whether or not the M&A diversifies activity, and whether the acquisition is domestic or cross-border.

Relative size of the acquired firm

The discount that acquired firms will accept when sold is smaller the larger they are (Kooli *et al.* 2003) and it does not depend on the size of the acquiring firm (Officer, 2007). The larger size of the acquired firm may increase its negotiating power and may also reduce the information asymmetry. In this situation, the probability that the acquiring firm will obtain discounts in the acquisition price is lower, and the integration of the firms may be more difficult. We expect that acquisitions of unlisted firms will be less probable when they have a larger relative size.

The relative size of the acquired firm is calculated as the transaction value divided by the market value of the acquiring firm four weeks prior to the M&A announcement (Moeller *et al.*, 2004). Less information asymmetry is expected the larger the acquired firm in comparison with the acquiring firm (Asquith, Bruner and Mullins, 1983).

Prior stake

The prior stake variable is included to cover the percentage of ownership held by the acquiring firm in the target firm prior to the M&A. If the acquiring firm has a stake in the acquired firm, there will be less information asymmetry. Also relevant discounts in the bid price will be less probable, based on the adverse selection arguments.

Diversified M&As

Overpayment is expected when listed firms are acquired, versus a discount in the bid price in the case of unlisted targets. However, the acquisition of listed firms may be preferable where there is greater information asymmetry in the valuation of target firms, which is often the case with unlisted firms, as we propose in hypothesis 2.

Information asymmetry may be lower in the valuation of target firms operating in the same sector as the acquiring firm. Knowledge of the sector makes valuation of bids less risky. The acquisition of firms in different businesses involves greater information asymmetry, with respect to both the sector and the valuation of the target firm. There is therefore a greater risk of over-valuing the assets and prospects of the firm to be acquired. The information asymmetry regarding the synergies involved in the M&A will also be greater when the target firm belongs to a human capital-intensive sector (Coff, 1999), and when the value of the acquired firm depends largely on intangible assets as this makes it more difficult to communicate and verify its value. In sectors with intensive research and development, acquisitions tend to involve listed firms (Shen and Reuer, 2005). In such cases, the share price is a signal of the firm's quality (Capron and Shen, 2007).

The greater the information asymmetry on the value of the target firm, the higher the probability that listed firms will be acquired. Thus, an unlisted firm is less likely to be

acquired if the M&A aims to diversify activity or if the target firm belongs to a sector with high intangible assets (Capron and Shen, 2007).

We identify acquisitions that diversify the acquiring firm's activity with a dummy variable taking the value of one if the first two digits of the SIC code for the main business of the acquirer and the acquired firms are not the same, and zero otherwise (Campa and Kedia, 2002; Campa and Hernando, 2004; Moeller *et al.*, 2004).

Cross-border M&As

Information asymmetry when evaluating unlisted firms is also greater in cross-border M&As. Managers may prefer to acquire unlisted firms in domestic M&As, whereas if the acquisition is cross-border, they will try to minimize the information asymmetry by acquiring listed firms (Shen and Reuer, 2005).

A cross-border M&A is identified with a dummy variable taking the value of one if the acquiring firm and acquired firms are from different countries and zero if the M&A is domestic (Moeller *et al.*, 2004).

Legal and institutional environment

Managerial opportunism and information asymmetry may vary depending on the legal and institutional environment of the acquiring and target firms' countries. The legal and institutional environment may favor the acquisition of unlisted firms, as we propose in hypotheses 3 and 4. We consider the characteristics of the legal and institutional environment regarding shareholder protection in the acquiring firm's country and capital market development in the acquired firm's country.

Shareholder protection in the acquiring firm country

The shareholder protection variable is calculated as the product of the revised anti-director right proposed by Djankov, La Porta, López de Silanes and Shleifer (2008), and

the rule of law as defined by Kaufmann, Kraay and Mastruzzi, (2007) (Rossi and Volpin, 2004; Hangendorff, Collins and Keasy, 2007, and Bris and Cabolis, 2008). This variable controls both the legal origin of the country and the quality of its institutions.

The “anti-director right protection” variable reviewed by Djankov *et al.* (2008) is available for 72 countries and resolves the ambiguity considered by Pagano and Volpin (2005), and Spamman (2005), regarding the index calculated by La Porta *et al.* (1998).

The variable varies between zero and five, with higher values being associated with greater investor protection, linked to the existence of laws which explicitly establish protection for minority shareholders. The index for May 2003 is available so this is the reference taken in this paper.

The shareholder protection variable varies between -12.5 and 12.5, with higher values indicating stronger shareholder protection.

Minority shareholder protection in the acquiring firm country

We also consider the minority shareholder protection against expropriation of wealth by majority shareholders. It is estimated as the product of the anti-self dealing index of Djankov *et al.* (2008), multiplied by the rule of law, as defined by Kaufmann *et al.* (2007). The value of the minority shareholder protection variable results from multiplying the above-mentioned indices and varies between minus two point five and two point five.

Market capitalization in the acquired firm country

Hypothesis 4 requires consideration of the characteristics of the legal and institutional environment of the acquired firm, regarding information asymmetry, liquidity and access to capital markets. We define market capitalization as a measure of the

development of financial markets, creditor protection and quality of firms' financial statements in the acquired firm country.

The market capitalization variable estimates the relation between stock market capitalization and GDP per capita calculated by the World Bank. This variable measures the development of financial markets and their liquidity. Higher values for this variable indicate that the stock markets are more developed, and that there is higher liquidity for the sale of financial assets and enterprises. In turn, more developed financial markets reduce information asymmetry (La Porta *et al.* 1998).

Creditor protection in the acquired firm country

The creditor protection variable in the acquired firm country measures access to external financing. This is calculated by multiplying creditor rights as defined by Djankov *et al.* (2003) by the measure for rule of law, in line with prior studies by Rossi and Volpin (2004), Hangendorff *et al.* (2007) and Bris and Cabolis (2008).

The creditor right index measures the security of creditors in the case of bankruptcy and varies between zero (low creditor protection) and 4 (high creditor protection). We take the value for 2003. Higher values for this variable indicate strong creditor protection in the country. The legal efficiency variable varies annually and takes values between minus two point five and two point five. Higher values for this variable are associated with strong legal efficiency in a country. The creditor protection variable, calculated as the product of these two indices (creditor rights and legal efficiency) varies between -10 and 10.

Accounting standards in the acquired firm country

The Center for International Financial Analysis and Research calculates the accounting standard variable for each country (La Porta, López de Silanes, Shleifer and Vishny,

1999) on the basis of 90 accounting items relating to practices in each country. The index varies from zero to 90, with higher values indicating better quality in financial statements. The higher the accounting standards, the more transparency there will be in firms and, therefore, a higher general standard of corporate governance (Hangendorff *et al.*, 2007).

However, it was not possible to include this variable in this study because the data provided by La Porta *et al.* (1999) do not cover the period analyzed in this study.

Control variables

We consider the following control variables:

Leverage, defined as acquiring firm total debt over total assets at the end of the year prior to the deal (Martynova and Renneboog, 2011). Higher levels of leverage in the firm may act as a corporate control mechanism, reducing the probability of acquiring listed target firms for opportunistic reasons. Moreover, such deals require larger amounts of resources, so it would be less likely for firms with high debt ratios to undertake such operations.

Tangible assets, defined as the value of the acquiring firm's tangible assets over total assets at the end of the year prior to the deal (Faccio and Masulis, 2005). A higher percentage of tangible assets allows acquiring firms to access cheaper debt, reducing information asymmetry in comparison with firms that are more intensive in intangible assets. This variable proxies the firm's financial conditions and its capacity for paying back its debt.

Returns of the acquiring firm prior to the M&A announcement (run-up). This is defined as the abnormal returns of the acquiring firm prior to the announcement, in the interval (-60,-2), in line with Martynova and Renneboog (2011). This variable controls for possible use of inside information in markets.

Friendly M&As. This variable is defined as a dummy variable that takes the value of one if the managers of the acquiring firm do not oppose the operation and zero otherwise (Campa and Hernando, 2004; Moeller *et al.*, 2004; Goergen and Renneboog, 2004).

Full acquisition. A dummy variable taking value one if the acquiring firm acquires 100% of the acquired firm, and zero otherwise.

We also control for the fixed effects of the country, industry and year.

Results: determinants of the acquisition of unlisted firms

Table 3 shows the results of the probit model analyzing the determinants of the decision to acquire an unlisted firm rather than a listed one. The results' robustness is tested in Table 4, repeating estimations on the sample which excludes acquiring firms in the United Kingdom as they account for 40% of operations, which may bias the results.

The results support the proposed hypotheses of managerial opportunism, and the relevance of the legal and institutional environment of both the acquirer and the acquired firms' countries, as determinants of the decision to acquire a listed or unlisted firm. The information asymmetry hypothesis is partially confirmed.

The variables drawn up to proxy the relevance of managerial opportunism in the decision to buy an unlisted firm are significant, in agreement with hypothesis 1. The probability of acquiring an unlisted firm is lower the larger the size of the acquiring firm and the higher its cash-flow level and market-to-book ratio. These characteristics of the acquiring firm encourage managerial opportunism, which in turn favors the acquisition of listed firms. Also in line with the hypothesis on managerial opportunism as a determinant of the acquisition of listed firms is the lower probability of acquiring unlisted firms when the M&A is paid for with stocks. In this case, a group of controlling

shareholders is more likely to enter the acquiring firm because the concentration of ownership is greater in unlisted firms than in listed ones.

The stake of the majority shareholder in the acquiring firm is not a determinant of the decision for the whole sample but it is for the UK firm sub-sample, which is characterized by more dispersed ownership structures (Table 4). In accordance with hypothesis 1, the higher the stake of the majority shareholder in the acquiring firm and the higher the managerial control, the higher the probability that unlisted firms will be acquired. The quadratic variable of ownership held by the majority shareholder is also significant, with the turning point being at about forty percent for the different models estimated. That is, if the majority shareholder's stake in the acquiring firm exceeds forty percent, then there is less probability that it will acquire an unlisted firm, in line with the relevance of agency conflicts between majority and minority shareholders and the expected opportunistic behavior of majority shareholders in such cases.

The variables drawn up to estimate the relevance of information asymmetry as a determinant of the acquisition of unlisted target firms are significant and have the expected sign. These are the relative size of the acquired firm and the relative size of a prior stake held by the acquiring firm. The greater the relative size of the acquired firm and the prior stake of the acquiring firm in the acquired firm, the less probable it is that an unlisted firm will be acquired. In such cases, the advantage of obtaining discounts in the selling price may reduce both the acquiring firm's information asymmetry and its negotiating power. These results are in agreement with the first part of hypothesis 2, whereby information asymmetry regarding unlisted firms promotes acquisitions.

However, the second part of the hypothesis, which poses that excessive information asymmetry will prevent the acquisition of unlisted firms, with such cases being

associated with diversified and cross-border M&As, was not supported. Neither diversified M&As nor cross-border M&As are significant.

The legal and institutional environment is a determinant of the decision to acquire unlisted firms. On the one hand, according to hypothesis 3, the stronger the shareholder protection and the minority shareholder protection in the acquiring firm's country, the greater the probability that unlisted firms will be acquired. In such acquisitions, discounts in the selling price will be more likely, whereas in the acquisition of listed firms a premium can be expected. That is, alignment of managers' and shareholders' interests is more likely in countries in which there is higher shareholder protection. Capital market development in the acquired firm's country is also determinant, in line with hypothesis 4. Unlisted firms are less likely to be acquired the more developed their countries' financial markets are, as their liquidity will be greater and they will be more able to obtain funding. Firms will accept smaller discounts in their selling prices in countries with more developed capital markets.

The control variables are not significant, except for leverage, when acquiring firms in the UK are eliminated from the sample, in line with the higher probability of acquisition of unlisted firms the more the acquiring firm owes. This result is in agreement with leverage as a corporate control mechanism, as it reduces the probability of acquisitions of listed firms which are not motivated by creating value for shareholders.

Insert Table 3 here

Insert Table 4 here

CONCLUSIONS

Three out of every four M&As announced by European listed firms are for unlisted firms. However, there has been little research focus on this type of transactions, and the determinants and value creation involved. The conclusions of research focused on the acquisitions of listed firms may not necessarily be applied to the acquisition of unlisted firms. There may be differences for reasons of information asymmetry, agency conflicts and even the legal and institutional environment, as we suggest in this research.

Taking into account a database of M&As announced by European listed firms during the period 2002-2007, the study concludes that the acquiring shareholder value better the acquisition of unlisted firms. Significant rises in the share prices, of about two point seventy-one percent, may be associated with the announcement of such transactions, whereas the acquisition of listed firms leads to average rises of zero point fifty-nine percent.

Moreover, the determinants involved in the decision to acquire a listed firm, rather than an unlisted one, depend on the relevance of:

- Managerial opportunism. This probably occurs more in the acquiring firm countries in which there is less shareholder protection.
- Information asymmetry, which may lead to discounts in the bid price of unlisted firms, without diversification of activity or undertaking cross-border M&As holding back such operations. The greater probability of acquiring listed firms the lower the development of capital markets in the acquired firm country.

REFERENCES

- Akerlof, GA. 1970. The market for 'lemons': quality uncertainty and the market mechanism. *Quarterly Journal of Economics* **84**: 488-500.
- Aggarwal RK, Samwick AA. 2003. Why do managers diversify their firms? Agency reconsidered. *Journal of Finance* **58**: 71-118.
- Asquith P, Bruner R, Mullins D. 1983. The gains to bidding firms from merger. *Journal of Financial Economics* **11**: 121-139.
- Ball R, Shivakumar L. 2005. Earnings quality in United Kingdom private firms: comparative loss recognition timeliness. *Journal of Accounting and Economics* **39**: 83-128.
- Bris A, Cabolis C. 2008. The value of investor protection: Firm evidence from cross-border mergers. *The Review of Financial Studies* **21**: 605-649.
- Brown SJ, Warner JB. 1985. Using daily stock returns: the case of event studies. *Journal of Financial Economics* **14**: 3-21.
- Campbell CJ, Lo AW, Mackinlay AC. 1997. Event-study analysis". *The Econometrics of Financial Markets*. Ed. Princeton University Press.
- Chang S. 1998. Takeovers of privately held targets, method of payment, and bidder returns. *Journal of Finance* **53**: 773-784.
- Campa J, Kedia S. 2002. Explaining the diversification discount. *Journal of Finance* **57**: 1731-1762.
- Campa JM, Hernando I. 2004. Shareholder value creation in European M&As. *European Financial Management* **10**: 47-81.
- Capron L, Shen J. 2007. Acquisitions of private vs public firms: private information, target selection, and acquirer returns. *Strategic Management Journal* **28**: 891-911.
- Coff RW. 1999. How buyers cope with uncertainty when acquiring firms in knowledge intensive industries: Caveat Emptor. *Organization Science* **10**: 144-161.
- Corrado CJ. 1989. A nonparametric test for abnormal security-price performance in event studies. *Journal of Financial Economics* **23**: 385-395.
- Djankov S, La Porta R, López-De-Silanes F, Shleifer A. 2008. The law and economics of self-dealing. *Journal of Financial Economics* **88** (3): 430-465.
- Demsetz H, Lehn K. 1985. The structure of corporate ownership: causes and consequences. *Journal of Political Economy* **93**: 1155-1177.
- Dodd P, Warner JB. 1983. On corporate governance- A study of proxy contests. *Journal of Financial Economics* **11**: 401-438.
- Dong M, Hirshleifer D, Richardson S, Teoh SH. 2006. Does investor misevaluation drive the takeover market? *Journal of Finance* **61**: 725-762.
- Draper P, Paudyal K. 1999. Corporate takeovers: mode of payment, returns and trading activity. *Journal of Business Finance and Accounting* **26**: 521-558.
- Draper P, Paudyal K. 2006. Acquisitions: Private versus Public. *European Financial Management* **12**: 57-80.
- Faccio M, Masulis RW. 2005. The choice of payment in European mergers and acquisitions. *Journal of Finance* **60**: 1345-1388.
- Faccio M, McConnell J, Stolin D. 2006. Returns to acquirers of listed and unlisted targets. *Journal of Finance and Quantitative Analysis* **41**: 198-220.

- Francis BB, Hasan I, Sun X. 2008. Financial market integration and the value of global diversification: Evidence for U.S. acquirers in cross-border mergers and acquisitions. *Journal of Banking & Finance* **32**: 1522-1540.
- Fuller K, Netter J, Stegemoller M. 2002. What do returns to acquiring firms tell us? Evidence from firms that make many acquisitions. *Journal of Finance* **57**: 1763-1793.
- Goergen M, Renneboog L. 2004. Shareholder wealth effects of European domestic and cross-border takeover bids. *European Financial Management* **10**: 9-45.
- Graebner ME, Eisenhardt KM. 2004. The seller's side of the story: acquisition as courtship and governance as syndicate in entrepreneurial firms. *Administrative Science Quarterly* **49**: 366-403.
- Gregoriou GN, Renneboog L. 2007. *International mergers and acquisitions since 1990. Recent research and quantitative analysis*. Quantitative Finance Series. Elsevier Finance.
- Grossman S, Hart O. 1980. Takeover bids, the free rider problem and the theory of the corporation. *Bell Journal of Economics* **10**: 20-30.
- Hagendorff J, Collins K, Keasey K. 2007. Investor protection and the value effects of bank merger announcements in Europe and US. *Journal of Banking & Finance* **54**: 1969-1997.
- Jensen MC. 1986. Agency cost of free cash flow, corporate finance, and takeovers. *American Economic Review* **76**: 323-329.
- Jensen MC, Ruback RS. 1983. The market for corporate control: the scientific evidence. *Journal of Financial Economics* **11**: 5-50.
- Hansen R, 1987. A theory for the choice of exchange medium in mergers and acquisitions. *Journal of Business* **60**: 75-95.
- Kaufmann D, Kraay A, Mastruzzi M. 2007. Governance Matters VI: Governance Indicators for 1996-2006. *World Bank Policy Research*, June.
- Koeplin J, Sarin A, Shapiro AC. 2000. The private firms discount. *Journal of Applied Corporate Finance* **12**: 94-101.
- Kooli M, Kortas M, L'Her JF. 2003. A new examination of the private firms discount. *Journal of Private Equity* **6**: 48-55.
- Kuipers DR, Miller P D, Patel A. 2009. The legal environment and corporate valuation: Evidence from cross-border takeovers. *International Review of Economics and Finance* **18**: 552-567.
- La Porta R, López-De-Silanes F, Shleifer A, Vishny R. 1998. Law and Finance. *Journal of Political Economy* **106**: 113-1155.
- La Porta R, López-De-Silanes F, Shleifer A. 1999. Corporate ownership around the world. *Journal of Finance* **54**: 471-517.
- Makadok R, Barney JB. 2001. Strategic factor market intelligence: an application of information economics to strategy formulation and competitor intelligence. *Management Science* **47** (12): 1621-1638.
- Martin K. 1996. The method of payment in corporate acquisitions, investment opportunities, and management ownership. *Journal of Finance* **51**: 1227-1246.
- Martynova M, Renneboog L. 2008. Spillover of corporate governance Standard in cross-border mergers and acquisitions. *Journal of Corporate Finance* **14**: 200-223.
- Martynova M, Renneboog L. 2009. What Determines the Financing Decision in Corporate takeovers: Cost of Capital, Agency Problems, or the Method of payment? *Journal of Corporate Finance* **15**: 290-315.

- Martynova M, Renneboog L. 2011. The Performance of the European Market for Corporate Control: Evidence from the Firth Takeover Wave. *European Financial Management* **17**: 208–259.
- Milgrom PR. 1987. *Auction theory*. *Advanced in Economic Theory*, Bewley TF (ed). Cambridge University Press: Cambridge, U.K..
- Moeller SB, Schlingemann FP. 2005. Global diversification and bidder gains: A comparison between cross-border and domestic acquisitions. *Journal of Banking & Finance* **29**: 533-564.
- Moeller SB, Schlingemann FP, Stulz RM. 2004. Do shareholders of acquiring firms gain from acquisitions? *Journal of Financial Economics* **73**: 201-228.
- Myers S, Majluf N. 1984. Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics* **13**: 187-221.
- Officer M. 2007. The price of corporate liquidity: acquisition discounts for unlisted targets. *Journal of Financial Economics* **83**: 571–598.
- Officer M, Poulsen A, Stegemoller M. 2009. Target-firm information asymmetry and acquirer returns. *Review of Finance* **13**: 467–493.
- Pagano M, Volpin P. 2005. The political economy of corporate governance. *American Economic Review* **95**: 1005–1030.
- Reuer J, Ragozzino R. 2008. Adverse selection in acquisitions of new ventures: the roles of alliances and IPOs in M&A design. *Journal of Economic Behavior and Organization* **66**: 195-212.
- Roll R. 1986. The hubris hypothesis of corporate takeovers. *Journal of Business* **59**: 197-216.
- Rossi S, Volpin PF. 2004. Cross-country determinants of mergers and acquisitions. *Journal of Financial Economics* **74**: 277-304.
- Schewert GW. 1996. Markup pricing in mergers and acquisitions. *Journal of Financial Economics* **41**: 153-192.
- Shen J, Reuer J. 2005. Adverse selection in acquisitions of small manufacturing firms: a comparison of public with private targets. *Small Business Economics* **24**: 393-407.
- Spamann H. 2005. *Recoding LLSV's Law and Finance*. Mimeo, Harvard Law School.
- Travlos NG. 1987. Corporate takeover bids, method of payment and bidding firms' stock returns. *Journal of Finance* **42**: 973-963.

Table 1. Acquirer's cumulative average abnormal returns (CAAR) around the M&A announcement.

<u>Study</u>	<u>Country</u>		<u>Total Sample</u>	<u>Acquired firms</u>	
	<u>Acquiring firms</u>	<u>Acquired firms</u>		<u>Listed</u>	<u>Unlisted</u>
Fuller <i>et al.</i> (2002)	USA	Worldwide	1.77%**	-1%**	2.08%***
Moeller <i>et al.</i> (2004)	USA	USA	1.10%***	-1.02%***	1.50%***
Draper and Paudyal (2006)	UK	UK	0.66%***	-0.41%***	0.81%***
Faccio <i>et al.</i> (2006)	Europe ⁶ countries	Europe		0.38%	1.48%***
Capron and Shen (2007)	USA, UK, F	World		-0.72%	4.17%

***p<.001, **p<.01, *p<.05, †p<.10

USA, UK, F = mainly United States, United Kingdom and France (sample of 101 operations)

Table 2. Cumulative abnormal returns around the acquisition announcement

The sample includes 447 M&As announced by European listed firms during the period 2002-2007. Acquired firms may be listed or unlisted and worldwide.

<u>CAAR (-2,+2)</u>	<u>Listed acquired firm</u>	<u>Unlisted acquired firm</u>	<u>Diff.</u>
All firms	0.59% †	2.71%***	(p=0.03)*
N° Cases (N = 447)	113	334	
Dodd and Warner test	(1.86)	(12.23)	
(1) <i>Stock payment</i>	-1.27%	1.60%*	(p=0.18)
N° cases (N = 50)	19	31	
Dodd and Warner test	(0.82) ^a	(2.37)	
(2) <i>Cash payment</i>	1.46%**	2.98%***	(p=0.38)
N° cases (N = 317)	81	236	
Dodd and Warner test	(3.40)	(11.67)	
(3) <i>Mixed payment</i>	-2.10%	2.28%***	(p=0.03)*
N° cases (N = 80)	13	67	
Dodd and Warner test	(1.11) ^a	(3.80)	
Diff. (1)-(2)	(p=0.04)*	(p=0.50)	
Diff. (1)-(3)	(p=0.74)	(p=0.53)	
Diff. (2)-(3)	(p=0.06) †	(p=0.75)	

^a: Corrado test (1989).

***p<.001, **p<.01, *p<.05, †p<.10

Table 3. Determinants of the acquisition of unlisted firms

The sample includes 447 M&As announced by European listed firms during the period 2002-2007. The acquired firms may be listed or unlisted and worldwide. The dependent variable takes the value of 1 if an unlisted firm is acquired and 0 otherwise. Standard errors are robust to heteroskedasticity (White, 1980).

	(1)	(2)	(3)	(4)	(5)	(6)
H1: Managerial opportunism						
<i>Acquiring firm size</i>	-1.2849*** (-6.19)	-1.3363*** (-6.36)	-1.1487*** (-5.75)	-1.1484*** (-5.81)	-1.3482*** (-6.18)	-1.4185*** (-6.38)
<i>Majority shareholder ownership</i>	1.3923 (1.20)	1.5302 (1.31)	0.7053 (0.62)	0.8181 (0.72)	1.6047 (1.34)	1.8129 (1.51)
<i>Majority shareholder ownership²</i>	-1.6628 (-1.26)	-1.7728 (-1.34)	-1.3464 (-1.04)	-1.4050 (-1.08)	-1.8451 (-1.36)	-2.0275 (-1.49)
<i>Cash Flow</i>	-2.1695** (-2.87)	-2.1938** (-2.88)	-2.4457*** (-3.27)	-2.3138** (-3.06)	-2.2103** (-2.92)	-2.2395** (2.95)
<i>Market to Book</i>	-0.1113** (-2.93)	-0.1198** (-3.14)	-0.0987** (-2.62)	-0.1120** (-2.89)	-0.0937** (-2.53)	-0.1044** (-2.81)
<i>Stock payment</i>	-0.8065** (-2.78)	-0.7326** (-2.52)	-0.8118** (-2.79)	-0.7408** (-2.55)	-0.8964** (-3.01)	-0.7897** (-2.65)
H2: Information asymmetry						
<i>Relative size acquired firm</i>	-0.5985*** (-3.98)	-0.6288*** (-4.14)	-0.6129*** (-3.98)	-0.5762*** (-3.89)	-0.6649*** (-4.16)	-0.7132*** (6.38)
<i>Prior stake</i>	-0.0223** (-2.68)	-0.0234** (-2.80)	-0.0269** (-3.24)	-0.0233** (-2.84)	-0.0262** (-3.08)	-0.0278** (-3.24)
<i>Diversified M&As</i>	0.1611 (0.91)	0.1482 (0.83)	0.1607 (0.91)	0.1396 (0.80)	0.1948 (1.07)	0.1723 (0.94)
<i>Cross-border M&As</i>	-0.2609 (-1.45)	-0.1879 (-1.03)	-0.2579 (-1.44)	-0.2640 (-1.42)	-0.1961 (-1.06)	-0.0864 (-0.45)
H3: Legal and institutional environment of acquiring firm						
<i>Shareholder protection</i>	0.1522** (3.09)				0.2054*** (3.90)	
<i>Minority shareholder protection</i>		0.6834*** (3.67)				0.9187*** (4.52)
H4: Legal and institutional environment of acquired firm						
<i>Market capitalization</i>			-0.6373*** (-3.32)		-0.8192*** (-4.10)	-0.8737*** (-4.30)
<i>Creditor protection</i>				0.0135 (0.35)		
Control variables						
<i>Leverage</i>	0.6429 (1.13)	0.6794 (1.19)	0.2300 (0.40)	0.4772 (0.85)	0.3481 (0.59)	0.3666 (0.62)
<i>Tangible assets</i>	0.4713 (0.68)	0.5092 (0.73)	1.3145 (1.87)	0.7413 (1.09)	1.1212 (1.53)	1.2358† (1.66)
<i>Run up</i>	2.4568 (0.49)	2.3099 (0.46)	1.5489 (0.30)	1.4689 (0.29)	3.0334 (0.59)	2.6268 (0.51)
<i>Intercept</i>	-0.0720 (-0.08)	-0.1374 (-0.15)	1.1194 (1.30)	0.6930 (0.80)	0.1171 (0.13)	0.1096 (0.11)
<i>Industry, country and year controls</i>	Yes	Yes	Yes	Yes	Yes	Yes
Wald chi ²	82.86	86.05	90.88	82.66	91.71	94.27
Prob>chi ²	0.000	0.000	0.000	0.000	0.000	0.000
Observations	418	418	416	418	416	416

***p<.001, **p<.01, *p<.05, †p<.10

Table 4. Determinants of the acquisition of unlisted firms, excluding UK firms

The sample includes 119 M&As announced by European listed firms during the period 2002-2007 (excluding M&As announced by UK firms). The acquired firms may be listed or unlisted and worldwide. The dependent variable takes the value of 1 if an unlisted firm is acquired and 0 otherwise. Standard errors are robust to heteroskedasticity (White, 1980).

	(1)	(2)	(3)	(4)	(5)	(6)
H1: Managerial opportunism						
<i>Acquirer size</i>	-1.2968*** (-4.44)	-1.3467*** (-4.48)	-1.4445*** (-4.62)	-1.2253*** (-4.34)	-1.5428*** (-4.66)	-1.5296*** (4.65)
<i>Majority shareholder ownership</i>	2.7068† (1.78)	2.0309 (1.32)	3.1303† (1.98)	2.5934† (1.72)	3.2914* (2.05)	2.5909 (1.62)
<i>Majority shareholder ownership²</i>	-3.4482† (-1.96)	-2.7460 (-1.54)	-4.1508* (-2.28)	-3.5318* (-2.02)	-4.0390* (-2.20)	-3.3695† (-1.81)
<i>Cash Flow</i>	-4.0114** (-2.81)	-5.0982*** (-3.31)	-3.9958** (-2.91)	-4.0116** (-2.82)	-3.9886** (-2.87)	-4.8429*** (-3.28)
<i>Market to Book</i>	0.0185 (0.14)	0.0330 (0.23)	0.0571 (0.40)	-0.0007 (-0.01)	0.0846 (0.56)	0.0817 (0.54)
<i>Stock payment</i>	-0.8932* (-2.22)	-0.9955* (-2.40)	-0.6542† (-1.69)	-0.7663† (-1.95)	-0.8152* (-2.01)	-0.8467* (-2.06)
H2: Information asymmetry						
<i>Relative size acquired firm</i>	-1.7979*** (-4.53)	-1.9071*** (-4.56)	-2.0475*** (-4.78)	-1.7463*** (-4.51)	-2.1245*** (-4.78)	-2.1663*** (-4.79)
<i>Prior stake</i>	-0.0253* (-2.09)	-0.0263* (-2.14)	-0.0311* (-2.56)	-0.0285* (-2.40)	-0.0277* (-2.24)	-0.0293* (-2.35)
<i>Diversified M&As</i>	0.4056 (1.55)	0.4150 (1.56)	0.4161 (1.52)	0.3688 (1.42)	0.4710 (1.69)	0.4550 (1.63)
<i>Cross-border M&As</i>	-0.4707† (-1.69)	-0.5966* (-2.03)	-0.0769 (-0.26)	-0.3880 (-1.42)	-0.1581 (-0.53)	-0.2611 (-0.83)
H3: Legal and institutional environment of acquiring firm						
<i>Shareholder protection</i>	0.1534 (1.54)				0.1840† (1.70)	
<i>Minority shareholder protection</i>		2.3938** (2.60)				1.9808* (2.09)
H4: Legal and institutional environment of acquired firm						
<i>Market capitalization</i>			-1.2097*** (-3.80)		-1.2311*** (-3.87)	-1.1117*** (-3.47)
<i>Creditor protection</i>				-0.0029 (-0.05)		
Control variables						
<i>Leverage</i>	2.2003* (2.27)	2.4399* (2.47)	1.8044† (1.79)	1.9839* (2.10)	1.9958† (1.92)	2.1504* (2.06)
<i>Tangible assets</i>	-1.5422 (-1.16)	-1.8904 (-1.40)	-0.8703 (-0.65)	-0.9694 (-0.78)	-1.5334 (-1.07)	-1.6105 (-1.12)
<i>Run up</i>	-6.2550 (-0.85)	-8.0570 (-1.06)	-7.4667 (-1.00)	-6.0216 (-0.83)	-7.4691 (-0.98)	-8.7750 (-1.14)
<i>Intercept</i>	-8.2722 (-0.01)	-7.6356 (-0.01)	-8.1592 (-0.01)	-7.9904 (-0.01)	-8.3286 (-0.01)	-7.7736 (-0.01)
<i>Industry, country and year controls</i>	Yes	Yes	Yes	Yes	Yes	Yes
Wald chi ²	99.43	99.62	76.61	93.55	93.19	88.56
Prob>chi ²	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Observations	248	248	247	248	247	247

***p<.001, **p<.01, *p<.05, †p<.10