



What determines the financing decision in corporate takeovers: Cost of capital, agency problems, or the means of payment?

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ABSTRACT

How is a takeover bid financed and what is its impact on the expected value creation of the takeover? An analysis of the sources of transaction financing has been largely ignored in the takeover literature. Using a unique dataset, we show that external sources of financing (debt and equity) are frequently employed in takeovers involving cash payments. Acquisitions with the same means of payment but different sources of transaction funding are in fact quite distinct. Acquisitions financed with internally generated funds significantly underperform those financed with debt. The takeover financing decision is influenced by the bidder's pecking order preferences, its growth potential, and its corporate governance environment, all of which are related to the cost of external capital. The choice of equity versus internal cash or debt financing also depends on the bidder's strategic preferences with respect to the means of payment.

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1. Introduction

The empirical literature has given notable attention in recent years to the choice of the means of payment in corporate takeovers (see e.g. Travlos, 1987; Amihud et al., 1990; Martin, 1996; Ghosh and Ruland, 1998; Faccio and Masulis, 2005). In this literature, the term 'means of payment' is usually considered as synonymous to the 'sources of takeover financing'. Proxying the sources of financing by the means of payment may induce some inaccuracies which may be particularly severe for all-cash offers which are usually assumed to be entirely financed with cash. In actual fact, of the acquisitions entirely paid with cash (which stand for about 63% of all takeovers), one-third is at least partially financed with external funds. Seventy percent of the takeovers with external funding are financed with debt and 30% with equity. Of the firms opting to make an offer consisting of a combination of equity and cash (20% of all takeovers), 37% borrow to finance the cash component of the offer. Therefore, the conclusions about the validity of the theories explaining the firm's financing decision may be incomplete or even incorrect if they are derived from the analysis of motives underlying the choice of the means of payment. This paper contributes to the takeover literature by explicitly investigating the (differing) motives underlying the bidder's decision on how to finance a takeover bid and on what to offer the target's shareholders.

By classifying takeovers by their sources of financing (rather than by their means of payment), we test the predictions derived from the dominant theories of how companies fund their investment projects. This is a novel way to test whether the bidder's

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financing decision is driven by the following explanations: *pecking order* and *market timing* (Myers and Majluf, 1984), *regulatory environment* (La Porta et al., 1997), *debt overhang* (Myers, 1977), *takeover threat* (Zwiebel, 1996), or the *agency costs of equity and debt* (Jensen and Meckling, 1976). As the choice of capital to fund takeovers may also depend on the means of payment offered to the target's shareholders, we also relate the bidder's financing decision to his preferences for a specific payment method. Specifically, we consider how the choice of sources of financing of mergers and acquisitions (M&As) is affected by the bidder's needs to use a specific means of payment to diversify the *risk of overpayment* for the target (Hansen, 1987), the risk of a *change in the firm's control structure* (Faccio and Masulis, 2005), and the *risk of a bid's failure* (Fishman, 1989). As the bidders' choice of the sources of funding may convey additional information to the market about the quality of the firm and the profitability of the takeover, we further complement our analysis with evidence of the valuation effect of takeovers financed with different types of capital.

To our best knowledge, this is the first empirical study that models the sources of financing along with the means of payment used in corporate takeovers.² The lack of reliable data on the sources of takeover financing may have been the main reason why the financing decision of the bidding firms has never been investigated before. Our analysis is based on a unique hand-collected dataset of European takeover bids that were launched during the fifth takeover wave (1993–2001).³

Our main findings are that the *financing decision* (the bidder's choice between cash, debt, and equity financing) is explained by *pecking order* preferences, and the corporate governance environment that influences the costs of external capital. We find no evidence that the financing decision is driven by potential agency conflicts between managers and shareholders, or between shareholders and creditors. There is evidence that the choice of equity versus internal cash or debt financing is also influenced by the bidder's strategic preferences with respect to the means of payment. A nested logit analysis reveals that the *payment decision* depends on the degree to which the bidder's large shareholders wish to retain control after the takeover, and on the intention of the bidder's shareholders to share the risk of the transaction with the target's shareholders or to buy all these shareholders out. These factors do not directly influence the financing decision, but only indirectly through the means of payment choice. Therefore, we conclude that the two decisions on the means of payment and on the sources of financing in corporate takeovers are driven by distinct determinants.

The analysis of the valuation effect of takeovers financed with different sources reveals that investors take into account the information signalled by the choices of both the payment method and the sources of financing. A significantly negative price revision following the announcement of a takeover frequently arises in case of M&As fully paid with equity but also of takeovers that involve *equity financing* (including cash-paid and mixed-paid M&As). We also find that acquisitions *financed with internally generated funds* underperform debt-financed deals, suggesting that investors are wary that cash-financed deals may be driven by managerial empire building motives. In contrast, *debt financing* conveys a positive signal to the market that the firm's shares may not be overvalued and that the takeover is profitable (and generates a tax shield). Thus, the bidder's financing decision has a significant impact on the market reaction to the takeover announcement. Our evidence shows that previous research that partitioned takeover bids into cash versus equity offers is an oversimplification of the reality.

The remainder of the paper is organized as follows. In Section 2, we formulate the hypotheses on what drives the bidder's choice of how to finance the takeover. We also derive predictions for the valuation effect of takeovers financed with different types of capital. Section 3 describes the sample selection procedure, data sources, and sample statistics. Section 4 discusses the methodology. In Section 5, we present and interpret our empirical findings. Section 6 concludes.

2. Motivation and hypotheses

A prominent view in the corporate finance literature is that equity issues reduce firm value. Indeed, share price reductions arise when equity is used as a means of payment in M&As (see e.g. Moeller et al., 2004; Andrade et al., 2001; Franks et al., 1991) or when seasoned equity offerings are made (see e.g. Asquith and Mullins, 1986; Masulis and Korwar, 1986; Mikkelsen and Parch, 1986). In spite of the negative price reactions, financing investment activities with equity issues has been a common phenomenon over the past two decades. Corporate takeovers present a unique setting to investigate empirically why companies opt for equity financing despite its negative impact on firm value. Recent empirical evidence shows that equity has become an increasingly popular source of financing in M&As (see Andrade et al., 2001; Martynova and Renneboog, 2006). This study of takeover financing enables us to test whether the bidder's choice of funding sources depends on a wide range of bidder characteristics (such as cash flow, debt capacity, corporate governance regime, and growth opportunities), and whether it is also influenced by the characteristics of the investment project (the takeover).

We divide our analysis into two parts. First, we investigate the determinants of the financing decision. Section 2.1 reviews the predictions from existing theoretical and empirical literature with respect to the factors that are expected to shape the corporate preferences for a specific source of financing: internal funds, debt, equity or a mix of these sources. Second, we investigate whether the choice of the sources of takeover financing is relevant to the bidding firm's value. Section 2.2 derives the hypotheses with respect to the market reaction to the announcement of takeovers financed with different sources.

² Schlingemann's (2004) study is related but differs significantly from our paper for the following reasons: (i) it focuses on the ex ante *ability* of a bidder to finance an M&A with cash, debt, or equity and hence not the actual financing of the transaction, (ii) it does not model the payment/financing choice but examines the impact of the possible transaction financing on the bidders' announcement abnormal returns, and (iii) it examines cash-paid M&As only.

³ The 1990s takeover wave occurred in the US, Europe and to some extent in Asia, and is often labelled the 'fifth' takeover wave. This wave picked up in the early 1990s and collapsed mid 2000 with the abrupt decline of the stock markets following the bursting of the internet/high tech bubble. Strictly speaking, the numbering of the takeover waves refers to the US because prior to the 1960s, M&A activity in other regions was either modest or quality data are missing. For an overview of the takeover waves, see Martynova and Renneboog (2008b).

2.1. The determinants of the financing decision

An extensive body of theoretical and empirical research on the determinants of corporate financing decisions can be partitioned into two dominant explanations: cost of capital considerations and agency-related issues. The former explanation upholds that market imperfections or institutional rigidities, such as information asymmetries (Myers and Majluf, 1984), legal protection of shareholders and creditors (La Porta et al., 1998), or taxes (Modigliani and Miller, 1963) may disproportionately affect the costs of debt and equity capital. The latter explanation endorses that a firm issues specific securities to mitigate agency problems between its management, shareholders, and creditors (Myers, 1977; Zwiebel, 1996). For the financing decision in corporate takeovers in particular, we propose a third explanation: the preferred payment mode in the takeover deal may influence the financing sources chosen by the bidding firm. In the remainder of this section, we formulate the hypotheses on how the bidder's choice of the sources of takeover financing depends on the cost of capital considerations (Section 2.1.1), agency problems (Section 2.1.2), and on the preferences for specific payment methods in the takeover deal (Section 2.1.3).

2.1.1. Cost of Capital considerations (CC)

Pecking order and market timing

The negative price reaction to the announcement of equity issues is typically ascribed to asymmetric information. Myers and Majluf (1984) argue that investors consider an equity issue as a signal that a firm is overvalued. This adverse price effect of an equity issue increases its costs and forces firms to issue equity only when alternative sources of financing are unavailable or too costly. However, the value reduction induced by equity issues may be less severe in periods of stock market booms. Not only do buoyant equity markets overvalue shares in the short-run (hence making equity a relatively cheap source of financing), they also induce investors to under-react to negative signals about the firms' fundamental values (Baker et al., 2004).⁴ When contracting debt is no longer advantageous compared to issuing equity, firms are more likely to raise money for takeovers by performing seasoned equity issues (Choe et al., 1993). Consequently, we formulate the following predictions (CC1):

CC1(a): Equity financing of takeovers is more likely when a firm has insufficient cash funds and limited debt capacity to finance takeovers. A debt issue has priority over an equity issue and is more likely when firms are cash-constrained but still have sufficient debt capacity.

CC1(b): Equity financing of takeovers is more likely when the bidding firm experiences a significant increase in its share price, especially in periods of stock market booms.

Our measure of insufficient cash funds (i.e. an internal funding deficit) is the bidder's internally generated funds and cash surpluses divided by the transaction value (CFLOW/TRANSVAL and CHLDG/TRANSVAL respectively). A ratio less than one denotes that the bidder's internal sources of funds are insufficient to finance the acquisition entirely with cash. Two variables are used as proxies for the bidder's debt capacity: COLLATERAL is the percentage of tangible assets to total assets of the combined firm (sum of tangible assets of the bidding and target firms over sum of total assets of the two firms). As tangible assets can represent collateral for creditors, we expect firms with a higher percentage of tangibles to attract debt financing more easily (Myers, 1977; Hovakimian et al., 2001). The second variable, FIN LEVERAGE, is calculated as the sum of the bidder's long-term debt and the transaction value, divided by the sum of the bidder's book value of assets and the transaction value. All the variables mentioned above are calculated at the year-end prior to the deal announcement. Our measure of the bidder's share price performance prior to the bid consists of the daily abnormal returns realized over the window starting 60 days and ending 20 days prior to the bid announcement (RUNUP). To control for stock market performance, we construct indicator variables for the periods 1993–1996 (stock market recovery), 1997–1999 (stock market boom), and 2000–2001 (stock market decline).

Regulatory environment

A growing literature advocates that regulation is a key determinant of corporate financing decisions. La Porta et al. (1997, 1998), Levine (1999), Djankov et al. (2007) argue that regulation affects the terms at which financiers are willing to provide firms with funds. Martynova and Renneboog, 2008a give evidence of spill-over effects of corporate governance standards in cross-border acquisitions. When a regulatory environment protects the providers of funds against expropriation by corporate management, external finance may be available at lower costs. Specifically, strong creditor protection assumes that lenders can more easily force repayment, take possession of collateral, or even gain control over the firm. This results in lower creditor risks and hence in lower costs of borrowing. Consequently, borrowing becomes relatively more attractive. Similarly, strong shareholder protection increases the relative attractiveness of equity financing. Better protection by law enables shareholders to reduce the risks of their investments by participating in or monitoring corporate decision-making. These reduced risks imply a lower cost of equity. In addition, a bidder is more likely to issue equity in countries with higher corporate disclosure standards, as the adverse effects of

⁴ The overvaluation of a bidding firm's equity may also have an important bearing on the choice between cash or equity payments (and hence the financing) in a takeover bid. Shleifer and Vishny (2003) and Rhodes-Kropf and Vishwanathan (2003) show that overvalued bidders use equity to buy real assets of undervalued (or less overvalued) targets. This way they hope to take advantage of the mispricing premium over the longer term when the overvaluation may be corrected.

equity issues are less severe when corporate activities are more transparent. Overall, as the financing choice depends on the relative magnitude of the costs associated with debt and equity issues, we hypothesize that:

CC2(a): Firms are more likely to use debt financing in countries where the costs of issuing equity are substantially higher due to poor shareholder protection or where the costs of borrowing are relatively lower due to better creditor protection.

CC2(b): The use of equity financing is more likely in countries with higher transparency standards.

We measure the differences in the regulatory corporate governance environment (shareholder and creditor protection, and transparency standards) across European countries with corporate governance indices developed by Martynova and Renneboog (2009). The creditor protection index (CREDITOR PRT) measures the degree to which national bankruptcy and reorganization laws protect the interests of creditors from being dismissed by managers acting in their own or the shareholders' interests. The shareholder rights protection index (SHAREHDR PRT) quantifies the regulatory provisions that aim at mitigating managerial opportunistic behaviour with respect to the shareholders. A higher index score signifies a higher likelihood that the management acts in the interest of shareholders. The transparency index (TRANSPARANCY) is based on the quality of information available about the company and the management. This index reflects the degree to which the market is informed about corporate policies and the contracts directly related to the management, as well as about the frequency with which this information is released.

La Porta et al. (1998) argue that a system of strong legal enforcement may substitute for weaker regulation, as well-functioning courts can effectively resolve disputes between corporate constituencies. Conversely, laws designed to uphold the rights of shareholders may be eroded in case the judiciary does not function effectively. To capture such issues, we multiply our indices by an index representing the quality of law enforcement. We use two proxies for the law enforcement index: the rule of law index (RULE OF LAW) and the corruption index (CORRUPT), both developed by the World Bank. The rule of law index measures the extent to which agents have confidence in and abide by the rules of society, which include the effectiveness and predictability of the judiciary and the enforceability of contracts. The corruption index measures the extent to which one can exercise public power for private gain. Corruption is usually associated with a lack of respect for the rules of society, and hence represents a failure of the judicial system to enforce the law. A higher score of each index indicates that a national judicial system is more effective.⁵

2.1.2. Agency problems between corporate claimants (AG)

Agency costs of equity and takeover threats

For managers who pursue a personal agenda at the expense of shareholders' wealth, a debt issue may be regarded as the least preferred source of financing as it restricts the availability of corporate funds at their disposal (Jensen and Meckling, 1976). In contrast, an equity issue increases the funds under managerial discretion and hence may be strictly preferred by the entrenched manager. This agency conflict between the management and shareholders is most pronounced in widely-held corporations where shareholder activism and efficient monitoring of the management may be lower. Therefore, we predict that:

AG1(a): Firms with a diffuse ownership structure are more likely to issue equity to finance takeovers.

As dispersed (atomistic) shareholders have few incentives to monitor their management directly, they rely on external monitoring by the market for corporate control (Barca and Becht, 2001; Goergen and Renneboog, 2001). Zwiebel (1996) shows that entrenched managers may voluntarily opt for debt financing because of the takeover threat from the market for corporate control. In his dynamic model, hostile takeovers target poorly performing firms and replace their management. The threat of losing their jobs and perquisites provides managers with an incentive to focus on the shareholder value maximization, and a debt issue allows them to constrain credibly their discretion over corporate funds. Therefore, we expect that:

AG1(b): Managers anticipating a takeover threat are more likely to finance acquisitions with debt.

We employ two variables to measure the dispersion of the bidder's corporate control structure. First, CONTROL (%) is the ultimate voting stake owned by the bidder's largest shareholder. The second variable, BLOCKHDR > 20, is a binary variable indicating the presence of a blockholder owning a voting stake of at least 20%. Following Faccio and Lang (2002), we assume that that 20% of the voting shares suffices to ensure control. We also consider alternative control thresholds of 10% and 15%. However this does not materially change the results of our regression analysis. If no shareholder exceeds the threshold, we consider the company to be widely held. The measure of the bidder's takeover vulnerability, TO THREAT, is the likelihood that the bidder is a target of a corporate takeover in the year preceding the acquisition. It is estimated by a probit model applied to all European firms for the period 1993–2001.⁶

⁵ The World Bank indices on legal enforcement and corruption are available since 1996. For the years prior to 1996, we assume that the quality of law enforcement environment was similar to that of 1996. Therefore, the missing values of the rule of law and corruption indices for years 1993–1995 are proxied by the value of the corresponding indices in 1996.

⁶ The sample of European firms for the period 1993–2001 is an unbalanced panel. The dependent variable in the probit model equals one if the company was acquired during the year and is zero otherwise. The set of independent variables is taken from the prior literature explaining the probability of takeovers (Hasbrouck, 1985; Palepu, 1986; Ambrose and Megginson, 1992; Cremers et al., forthcoming). The estimated parameters of the model are available upon request.

Debt overhang

Myers (1977) argues that the conflicting interests of shareholders and creditors may encourage firms to issue equity rather than debt to raise external funds. In his view, the wealth-maximizing preferences of shareholders dictate that managers undertake a project only if its expected benefits exceed the payments to debtholders. This may lead to underinvestment as managers may forego positive NPV investment projects if the expected benefits only suffice to repay debt and leave no or little return to the shareholders. To minimize the scope of underinvestment, firms with high quality projects may limit leverage and hence avoid further borrowing. This leads us to the following prediction:

AG2: Firms with high growth potential are more likely to issue equity to finance acquisitions.

Our main measure of the bidder's growth potential is Tobin's Q, calculated as the bidder's market value of equity (ordinary and preferred) plus the book value of total debt divided by the sum of the book values of equity and total debt. Other measures considered are the average growth rate in sales (SALES 3YGR), in capital expenditures (CAPX 3YGR), and in total assets (TA 3YGR) over the 3 years prior to the year of the acquisition. The advantage of these growth measures is that they are not affected by differences in accounting policies across firms (countries), while their disadvantage is that, in contrast to Tobin's Q, they are not forward-looking. Detailed definitions of variables are given in [Appendix A](#).

Agency cost of debt and financial flexibility

In addition to the underinvestment problem, conflicts of interests between shareholders and creditors may also lead to another agency problem; namely, excessive risk taking by the management. Black and Scholes (1973) show that the equity of a leveraged firm is a call option on the firm's assets whose value increases with the volatility of future cash flows. This implies that the management can maximize shareholder wealth by increasing the risk of the projects it invests in, and hence re-distribute wealth from bondholders to shareholders. Higher earnings volatility increases the expected bankruptcy costs which creditors may anticipate by demanding better terms in the debt covenants. Consequently, the cost of borrowing increases, which makes debt financing less attractive or even prohibitively expensive for leveraged and risky firms. This leads to the following hypothesis:

AG3(a): Highly leveraged and risky firms are less likely to use debt financing.

Bolton and Freixas (2000) formulate an alternative theory. In their capital market equilibrium, risky firms prefer bank loans to equity financing because banks are good at helping firms through times of financial distress. That is, firms facing a high risk of bankruptcy are more likely to establish close lending relationships with banks. This provides them with access to the cheapest form of flexible financing. Safer firms prefer to issue equity (and bonds) and hence avoid paying the intermediation cost associated with bank loans. Whereas Bolton and Freixas (2000) distinguish between debt financing in the form of a bank loan and a bond issue, we are unable to follow this classification due to the data limitations described in [Section 3.1](#). However, we can test the predictions of their model on the firm's preference between equity and debt financing in the form of bank loans for the following two reasons. First, the European market for corporate bonds is small (relative to that of the US). Furthermore, most of the debt financing consists of bank loans (common in e.g. Germany) or of private placements of loan notes (common in the UK).⁷ Second, in terms of the firm's ability to renegotiate debt contracts in the times of financial distress, privately issued loan notes (which are also frequently unsecured) are more similar to bank loans than to publicly issued bonds. The reason is that public debt is difficult to renegotiate due to coordination problems between small creditors (bondholders), whereas private debt (privately issued loan notes) – just like bank loans – frequently involves only one or a group of large creditors. Therefore, following the predictions of Bolton and Freixas (2000), we hypothesize that:

AG3(b): Risky firms are more likely to choose debt financing in takeover deals.

AG3(c): Young risky firms are more likely to use equity financing in takeover transactions.

To proxy for the firm's risk, we employ the age of the bidding firm (AGE) and its exposure to the market risk (BETA) estimated by means of the market model over the period between 300 and 60 days prior to the takeover announcement. We expect the shares of relatively young firms and firms with high betas to be more risky.

2.1.3. Means of payment considerations (MP)

As the bidder's decision regarding the sources of takeover financing often coincides with or depends on the choice of the payment mode in the takeover deal, we complement our above analysis with the reasons why bidders prefer specific means of payment in corporate takeovers.

Risk sharing

Information asymmetries between bidder and target are an important determinant of the means of payment in corporate acquisitions. In particular, high uncertainty about the true value of the target firm induces the bidder to pay with its own equity

⁷ Renneboog and Szilagyi (2007) document that out of all European M&As that took place from 1996–2004, only 225 deals involve bidding firms with publicly traded Eurobonds. They only study the Eurobond market as this is the largest European bond market and the only one with a sufficiently liquid secondary market.

rather than cash. Capital participation in the combined firm makes the target shareholders share the risk of potential downward revaluations after the bid's completion. Hansen (1987) predicts that misvaluation of the target firm is especially harmful when the transaction value is high and the size of the target's assets is large relative to that of the bidder's assets. Therefore, we hypothesize that:

MP1: The probability that an equity offer is made increases with the absolute and relative transaction value.

To test the risk-sharing hypothesis, we employ three variables: the market value of the bidding firm (MVAL) measured 60 days prior to the bid announcement, the transaction value (TRANVAL) measured by the total amount the bidder pays to purchase shares of the target firm (excluding assumed liabilities), and the relative size of the transaction (RELVAL) calculated as the transaction value divided by the sum of the transaction value and the bidder's market capitalization.

The threat of control change

Faccio and Masulis (2005) document that a change in the corporate control structure – for instance, by means of voting power dilution or the emergence of an outside blockholder – may discourage bidders from paying for the acquisition with equity. These findings support the theories by Harris and Raviv (1988) and Stulz (1988) who predict that an equity exchange is less likely to be used when an equity issue dilutes the voting power of the blockholders or share-owning managers of the acquiring firm. Thus, the likelihood of an equity payment is here largely determined by the control structures of the bidding and target firms. In particular, a cash payment is strictly preferred to an equity payment when the target's share ownership is concentrated and a bidder's largest blockholder only holds an intermediate level of voting power. This preference is weakened if the target company is widely held or if the bidder's dominant shareholder has a supermajority of voting rights. We formulate the threat of control change hypothesis as follows:

MP2: A bidder is unlikely to offer an equity payment if this significantly changes the degree of control of the bidder's shareholders.

To capture the impact of an all-equity offer on the control structure of the bidding firm, we consider the following four variables. CONTROL THREAT is the voting stake in the combined firm that the largest shareholder of the target firm would obtain provided the acquisition is entirely paid with equity. An all-equity bid may create a new large shareholder in the merged firm which could threaten the control positions of the bidder's incumbent blockholders. To measure the vulnerability of the bidder's incumbent blockholder with respect to a potential control loss, we employ three indicator variables characterizing the bidder's control structure. Following Faccio and Masulis (2005), we distinguish between widely-held companies (in which no blockholders hold at least 20% of voting rights; $\text{CONTROL} < 20$), companies with intermediate control concentration (in which the largest blockholder owns a voting stake between 20% and 60%; $20 < \text{CONTROL} < 60$), and firms controlled by a blockholder holding a strong majority of voting rights ($\text{CONTROL} > 60$). Following Faccio and Masulis (2005), we consider voting stakes in the range of 20 to 60 percent as an intermediate level of voting power. This is the range where the control position of the large shareholder is most vulnerable to being diluted by an equity offer. Overall, we expect that the bidder's control structure is affected by an all-equity offer if the firm is widely held or is controlled by a shareholder with an intermediate level of voting power.

Characteristics of the takeover bid

Some characteristics of the takeover offer may also affect the choice of the payment method. First, an equity payment is less likely to be offered in cross-border takeovers. The target shareholders may be reluctant to accept an equity offer from a foreign acquirer if the latter's shares are not traded in the target's country. This is because the bidding firm's quality may be less known in the target's country (see e.g. French and Poterba, 1991; Coval and Moskowitz, 1999). Also, the regulation in the target's country may impose restrictions on foreign equity investments (Faccio and Masulis, 2005). Second, cash offers increase the probability of the bid's success in tender offers, mandatory bids, competing bids, and hostile takeovers, and are hence preferred by bidders in such types of transactions (Fishman, 1989). Third, the incumbent owners of an unlisted target are more likely to accept a cash payment, as their primary incentive to sell the firm is frequently to cash out.⁸ Therefore, equity bids are also least likely when the target firm is unlisted or closely-held. In sum, we expect that:

MP3: An equity payment is less likely in tender offers, hostile takeovers, cross-border acquisitions, and acquisitions of unlisted targets.

To test this prediction we construct four binary variables, TENDER OFFER, HOSTILE BID, CROSSBORDER BID, and LISTED TARGET, which take the value of one if the takeover transaction has the corresponding characteristic.

2.2. Valuation effects of the bidder's financing decision

An M&A announcement brings new (unexpected) information to the market which enables investors to update their expectations about the firm's prospects and adjust the share prices accordingly. Value-relevant takeover information comprises

⁸ For a detailed analysis of the impact of the private versus public status of the target firm on the bidder's returns and on the means of payment decision: see Fuller et al. (2002) and Officer et al. (forthcoming).

various takeover characteristics (the form of the bid, the attitude of the target's board towards the bid, cross-border expansion, the means of payment, industry-relatedness, etc.) as well as the sources of financing (Goergen et al., 2005; Martynova and Renneboog, 2008b). The market combines these pieces of information into a signal about the quality of the takeover deal and the potential value creation. As such, the announcement effect consists of an appraisal of the takeover synergies based on the characteristics of the deal. Below, we summarize the predictions with regard to the market reactions to the announcements of takeovers financed with different types of capital.

Takeovers *financed with equity* are expected to trigger lower returns to the bidder's shareholders. The dominant explanation is that investors consider an equity issue as a signal that the bidder's shares are overpriced and hence adjust the share price downwards when equity financing is announced (Myers and Majluf, 1984). Managers attempt to time equity issues to coincide with surging stock markets or even with the peak of the stock market cycle (Baker et al., 2004). This overvaluation argument may be even more pronounced for M&As entirely *financed and paid with equity*. Shleifer and Vishny (2003) and Rhodes-Kropf and Viswanathan (2004) argue that overvalued bidders use equity to buy real assets of undervalued (or less overvalued) targets to take advantage of the mispricing premium over the longer term when the overvaluation will be corrected. An *equity payment* (which is not necessarily the same as equity financing) may also be interpreted by the market as a negative signal about uncertainty with respect to the target firm's quality and potential takeover synergies. If the quality of the acquired assets is more uncertain, the bidder is likely to pay with equity to share with the target's shareholders the risks of not being able to realize the expected synergies. Empirical evidence confirms the negative market reaction to M&As paid with equity (see e.g. Moeller et al., 2004; Andrade et al., 2001; Martynova and Renneboog, forthcoming).

In contrast to equity financing, the announcement of *debt financing* is expected to trigger a positive market reaction. First, the preference of debt over equity financing may signal that the bidder's shares are not overvalued. When internal sources of financing are insufficient the manager opts for debt financing if the shares of the firm are undervalued or there is a high risk that an equity issue will trigger a substantial share price decline. Second, as debt capital is typically raised in Europe via borrowing from a bank, the bank's decision to provide funding may convey a positive signal about the project's profitability to the market. Banks are typically regarded as financial intermediaries with superior information and evaluation capabilities (Leland and Pyle, 1977; Diamond, 1984) that allows them to identify bad acquisitions and fund only deals with a positive net present value. Therefore, the market may interpret the news about debt financing as a certification that a takeover will be profitable. Evidence of the banks' certification role is reported by Lummer and McConnell (1989) and Billett et al. (1995) who find that the market reacts positively when firms announce bank loans. In the context of corporate takeovers, Bharadwaj and Shivdasani (2003) also document positive market response to the announcements of bank-funded deals. Third, the choice of debt financing may also signal that the cash flows of the merged firm will be sufficient to sustain an additional tax shield.

The use of the third source of financing, *internally generated funds*, is likely to trigger a negative market reaction at the takeover announcement as this type of financing may identify acquisitions driven by free cash flow motives (Jensen, 1986). High cash flow reserves may encourage management to undertake acquisitions for empire building motives, which frequently lead to a reduction in shareholder value. Consistent with these predictions, Lang et al. (1991) and Schlingemann (2004) find a negative and significant relation between internally generated cash flow reserves and bidder returns in cash-paid M&As.

3. Sample selection, data sources, and sample description

The study explores a unique dataset compiled from more than 10 different databases. In this section, we describe the sample selection procedure and the data sources. We also provide an overview of the sample composition by sources of transaction financing and by means of payment.

3.1. Sample selection and data sources

We build our initial sample of European acquisitions performed between 1993 and 2001 from the Mergers and Acquisitions Database of the Securities Data Company (SDC). We focus on European domestic takeovers and intra-European cross-border acquisitions with both acquirer and target located in Continental Europe or the UK. M&As involving firms from Central and Eastern Europe are also considered. The deals included in the sample fulfil the following requirements: (i) the takeover aims at acquiring majority control; (ii) both parties in the transaction are independent corporations (divestitures and management buyouts are not included); (iii) neither the bidder nor the target is a financial institution (M&As involving banks, unit trusts, mutual funds, and pension funds are excluded); (iv) the bidder's shares are traded on a European stock exchange (but the target firm can be either listed or in private hands); (v) the period between two consecutive bids by the same acquirer is no less than 300 trading days (to avoid contamination of the periods used to estimate the systematic risk); (vi) financial and accounting data for at least one of the participants of the transaction is available from DataStream, and the Amadeus, Fame, and Reach databases; (vii) the ownership and control structures of bidding and target companies one year prior to the acquisition can be identified; and (viii) information on the sources of takeover financing is found. A total of 1361 completed M&As involving firms from 26 European countries satisfy these criteria.

The quality of the SDC data is verified by comparing its information on the announcement date, the bidding and target companies' country of origin, the transaction value, the payment structure, the control stake acquired, the bid completion status, and the target's attitude towards the bid, with information from the news announcements stored in LexisNexis, the Financial

Times, and Factiva.⁹ We find that the SDC records for M&As from our sample frequently do not coincide with those of the other sources. These inconsistencies have been double checked and amended. Amendments to SDC records were made in about 36% of the deals included in our final sample.¹⁰

The ownership and control structures of the bidding and target firms prior to the takeover announcement are collected from a variety of sources described in [Appendix B](#). To control for dual class shares, pyramidal ownership structures, multiple control chains, and cross-holdings, all of which prevail in Continental European companies, we focus on the corporate control composition rather than on the ownership structures. To identify the ultimate control structure of a firm, we follow the methodology presented in [Renneboog \(2000\)](#), [Faccio and Lang \(2002\)](#), and [Köke and Renneboog \(2005\)](#). First, we consider only shares bearing voting rights. Second, as control depends on both direct and indirect ownership of voting equity, we accumulate the voting stakes that are directly or indirectly controlled by the same ultimate shareholder. When a target company is private, we assume that the control concentration in that firm amounts to 100%. To identify how bidders finance their takeovers, we have checked the news announcements from LexisNexis, the Financial Times, and Factiva.

To identify how bidders finance their takeovers, we have checked the news announcements from LexisNexis, the Financial Times, and Factiva. While extracting financing information from all news announcements surrounding the takeover bid doubtlessly enables us to relate the financing decision and the takeover, most news announcements do not disclose a very detailed description of the financing arrangement. Consequently, we are able to identify how the bidding firm finances the deal (with internal funds, a debt issue, and/or an equity issue) but are unable to distinguish whether debt financing takes place by means of a bank credit or a loan notes/bond issue, or whether equity financing occurs in the form of a public or private equity placement. Furthermore, when two or more financing sources were used, the exact proportion of the sources is frequently not released. We therefore partition the financing sources into the following categories: (i) internal funds only, (ii) equity issues, (iii) debt issues, and (iv) a combination of equity and debt issues. Since financing with internally generated funds is at least partially used in almost all M&As, we only differentiate between those transactions which are fully financed by internally generated cash (the first category) and those which also involve sources of financing other than internal funds (the last three categories).¹¹

While the news announcements are our main source of information on how bidders finance their takeovers, we also explore other sources of information. First, for a sub-sample of 50 bidding firms, we study annual reports, prospectuses, and circulation letters available through Thomson Financial Research.¹² We cross-check the takeover financing information collected from the financial reports and find that this information virtually always coincides with that from the news announcements, which implies that this latter source is reliable. Second, we consult the Thomson Financial SDC New Issues database and search for public offerings of debt and equity by bidding firm. We assume that a security issue with the aim of financing an M&A transaction takes place in the period around the first public announcement of the takeover. Whereas it is usually rather straightforward to identify the security issues made in connection with M&As, the database's limitation is that it does not cover bank loans, an important source of financing in Continental Europe. As the coverage of the debt and equity issues by Continental European firms is rather incomplete in the SDC New Issues database, we include the financing information from the Thomson Financial SDC New Issues database only when information from the other sources (like news announcements) is not available.

3.2. Sample description

As mentioned above, we partition the sources of takeover financing into four general categories: internal funds only, equity issues, debt issues, and combinations of equity and debt issues, whereby the last three categories may also include the use of some internal funds. We further refine this classification based on the means of payment. Financing the takeover with internally generated funds or with debt implies that the acquisition is entirely paid with cash. Debt-financed acquisitions may also involve payment with loan notes. However, following [Faccio and Masulis \(2005\)](#), we assume that a payment with loan notes is equivalent to a cash payment. In the remainder of this paper, we do not differentiate between these two types of payment and refer to both as cash payments. In contrast, equity financing may be used in acquisitions fully paid with equity, with cash and equity, or entirely

⁹ We consider all news announcements available in English, French, German, Dutch, Italian, Spanish, Swedish, Portuguese, Russian, Czech, and Polish. For the announcements in languages that we do not master at least passively (Portuguese, Spanish, Swedish and Italian), we have used the WorldLingo online translator (www.worldlingo.com).

¹⁰ The percentage refers to all M&As from our sample for which at least one deal characteristic reported in SDC does not coincide with that from the other sources. Most of the inaccuracies found in the SDC records regard the control stake acquired, the bid completion status, and the transaction value.

¹¹ We focus on the ultimate financing (and payment) structure of the bid. That is, when the bidder offers the target's shareholders a choice between various payment alternatives (cash, equity, or a combination) which require different sources of financing, we search for the news announcements that refer to the final outcome of the offer in terms of the financing sources and means of payment. Although the final outcome of the offer may be affected by preferences of the target's shareholders, for the bid to succeed the bidder must also be satisfied with the financial structure of the deal. Therefore, the ultimate financing (and payment) structure of the takeover must be within the range of the bidder's preferences. The bidder is able to influence the target's shareholders choice by making his preferred payment (and financing) alternative more attractive for them. For instance, if the bidder prefers the target's shareholders to accept the equity offer rather than the cash offer, the latter will be discounted by several percentage points. Consequently, the ultimate terms of the deal are expected to be in line with the initial bidder's preferences. For example, the UK City Code obliges firms which make a tender offer to provide the target firm shareholders with a choice between different forms of payment: cash, equity, loan notes, or a combination.

¹² Financial reports are available in electronic photocopy format and hence do not allow us to search for keywords, which makes data search extremely time consuming. For this reason, we first considered 50 randomly chosen companies with financial reports available in order to check for inconsistencies between the information from financial reports and that from the news announcements collected earlier. We focus on UK bidders as their financial reports are published in English and because electronic translation (with WorldLingo) of the reports published in another language is impossible due to the photocopy format of these reports.

Table 1

Sample composition by bidder's country and by sources of takeover financing and means of payment.

	ALL		AUS	BEL	DEN	FIN	FRA	GER	IRE	ITA	LUX	NL	NOR	POR	ESP	SWE	SWZ	UK	OTH
	Num	%																	
Total number of M&As	1361		13	18	27	35	130	72	20	38	2	17	39	1	34	62	26	801	26
% of the sample		100	1.0	1.3	2.0	2.6	9.6	5.3	1.5	2.8	0.1	1.2	2.9	0.1	2.5	4.6	1.9	58.9	1.9
% OF M&A deals in the country																			
Cash Financing:	590	43.4	69.2	66.7	66.7	62.9	62.3	61.1	45.0	78.9	100	52.9	59.0	100	70.6	53.2	53.8	29.7	80.8
• Cash payment	590	43.4	69.2	66.7	66.7	62.9	62.3	61.1	45.0	78.9	100	52.9	59.0	100	70.6	53.2	53.8	29.7	80.8
Debt Financing:	173	12.7	0.0	0.0	11.1	0.0	5.4	8.3	10.0	7.9	0.0	29.4	0.0	0.0	5.9	1.6	23.1	17.2	0.0
• Cash payment	173	12.7	0.0	0.0	11.1	0.0	5.4	8.3	10.0	7.9	0.0	29.4	0.0	0.0	5.9	1.6	23.1	17.2	0.0
Debt & Equity Financing:	139	10.2	0.0	0.0	0.0	2.9	3.1	2.8	20.0	2.6	0.0	5.9	2.6	0.0	5.9	3.2	0.0	15.1	0.0
• Cash payment	42	3.1	0.0	0.0	0.0	0.0	1.5	1.4	15.0	2.6	0.0	5.9	0.0	0.0	2.9	1.6	0.0	4.0	0.0
• Cash-and-Equity payment	97	7.1	0.0	0.0	0.0	2.9	1.5	1.4	5.0	0.0	0.0	0.0	2.6	0.0	2.9	1.6	0.0	11.1	0.0
Equity Financing	459	33.7	30.8	33.3	22.2	34.3	29.2	27.8	25.0	10.5	0.0	11.8	38.5	0.0	17.6	41.9	23.1	38.0	19.2
• Cash payment	49	3.6	0.0	0.0	3.7	8.6	3.1	1.4	0.0	0.0	0.0	0.0	5.1	0.0	0.0	4.8	0.0	4.2	3.8
• Cash-and-Equity payment	162	11.9	7.7	5.6	3.7	2.9	3.8	4.2	10.0	2.6	0.0	5.9	5.1	0.0	2.9	8.1	7.7	17.0	0.0
• Equity payment	248	18.2	23.1	27.8	14.8	22.9	22.3	22.2	15.0	7.9	0.0	5.9	28.2	0.0	14.7	29.0	15.4	16.7	15.4
All sources of financing:	1361	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
• Cash payment	854	62.8	69.2	66.7	81.5	71.4	72.3	72.2	70.0	89.5	100	88.2	64.1	100	79.4	61.3	76.9	55.2	84.6
• Cash-and-Equity payment	259	19.0	7.7	5.6	3.7	5.7	5.4	5.6	15.0	2.6	0.0	5.9	7.7	0.0	5.9	9.7	7.7	28.1	0.0
• Equity payment	248	18.2	23.1	27.8	14.8	22.9	22.3	22.2	15.0	7.9	0.0	5.9	28.2	0.0	14.7	29.0	15.4	16.7	15.4

ALL = All countries, AUS = Austria, BEL = Belgium, DEN = Denmark, FIN = Finland, FRA = France, GER = Germany, IRE = Republic of Ireland, ITA = Italy, LUX = Luxembourg, NL = The Netherlands, NOR = Norway, POR = Portugal, ESP = Spain, SWE = Sweden, SWZ = Switzerland, UK = The United Kingdom, OTH = Bulgaria, Croatia, Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia. Num stands for number of takeover transactions.

with cash.¹³ A bidding firm may either directly exchange the shares from a seasoned equity issue for the shares of the target firm (in all-equity and cash-and-equity offers), or sell its new shares and use the proceeds to pay for the acquisition (all-cash payment). When the bidder issues debt and equity, it may pay for the target firm's shares with a combination of cash (and loan notes) and equity, or with cash (and loan notes) only.

Table 1 shows the sample composition by sources of transaction financing and by means of payment for each European country. A large part of M&A deals (43.4%) is fully financed with internally generated funds, whereas the remainder is at least partially financed with external capital. Internal financing is most frequently observed in Central and Eastern European countries (80.8% of all bids in the region), in Italy (78.9%), and in Spain (70.6%).

Equity issues are the second most frequently used source of takeover financing: they are used in 33.7% of the deals. The proportion of equity-financed transactions is highest in Sweden (41.9% of all bids), Norway (38.5%), the UK (38.0%), and Finland (34.3%). Most of the equity-financed acquisitions (89%) involve a direct equity payment to the target shareholders such that only 11% of the deals funded by a seasoned equity issue are all-cash offers. The percentage of acquisitions paid entirely with cash among the deals financed with equity is the highest in Scandinavia, Central and Eastern Europe, France, and the UK.

The least popular sources of financing in corporate takeovers are debt or a combination of equity and debt: they are used in 12.7% and 10.2% of all the M&A bids respectively. Acquirers incorporated in the Netherlands (29.4% of all bids in the country), Switzerland (23.1%), and the UK (17.2%) rely most frequently on debt financing. Combinations of equity and debt are not uncommon in Ireland (20.0% of all bids in the country) and the UK (15.1%).

When we make abstraction of the sources of financing and partition our sample only on the basis of the means of payment, we observe in Table 1 that a large majority of deals (62.8%) are entirely cash-paid whereas the remainder is at least partially paid with equity.¹⁴ Out of all the bids involving an equity payment, half are pure equity exchange offers. The other half consists of mixed offers that contain on average 53% of cash and 47% of equity. With exception of the UK and Ireland, acquirers prefer all-equity payments to the combination of equity and cash.

4. Methodology

4.1. Empirical models of the financing decision

To examine the factors driving the bidder's choice of the financing sources, we employ multinomial logit and nested logit models. The multinomial logit model assumes that the bidder chooses a source of financing from four mutually exclusive (independent) alternatives: cash, debt, debt-and-equity, and equity. The nested logit model extends the multinomial logit framework by allowing the bidder to make its financing decision conditional on the preferred payment method.

¹³ However, this excludes payments with loan notes, as this type of acquisitions would qualify as a transaction financed with a combination of equity and debt.

¹⁴ This percentage is lower than the 80% reported for European all-cash M&As in Faccio and Masulis (2005). The difference may be driven by the fact that we exclude from our sample the divestitures (acquisitions of subsidiaries) and the cross-border acquisitions of US targets. These types of takeovers represent a substantial fraction of Faccio and Masulis' sample and are most likely pure cash offers.

4.1.1. Multinomial logit model of the financing decision

In the multinomial logit framework, we assume that each financing choice j corresponds to the NPV of the takeover (net of all direct and indirect costs associated with the use of a particular source of financing) $V_j(x)$, where x is a vector of exogenous characteristics of the takeover and of the firms involved, and where j denotes one of the four financing alternatives: (i) cash financing (cash-paid/cash-financed deals); (ii) debt financing (cash-paid/debt-financed deals); (iii) debt-and-equity financing (cash-paid/debt-and-equity financed and mixed-paid/debt-and-equity-financed deals); and (iv) equity financing (equity-paid/equity-financed, mixed-paid/cash-and-equity-financed, and cash-paid/equity-financed deals). The bidder chooses alternative j if $V_j(x)$ yields the maximum of the four possible values. Hence the probability of the choice j is:

$$Pr_j = \text{Prob}(V_j > V_k) \text{ for all other } k \neq j.$$

The model assumes that the (unobserved) takeover value $V_j(x)$ is a linear function of the observed relevant characteristics of the bidder and the target and of the bid itself (x) plus random noise (ε):

$$V_j(x) = x'\beta_j + \varepsilon$$

A key assumption of the multinomial logit model is that the random noise (ε) in the value function is independently and identically distributed (*iid*). This assumption implies that the choices between any two alternatives are independent of the others, i.e. that the independence of irrelevant alternatives (IIA) property is upheld (that is, if one of the alternatives is removed from the model, the other alternatives will have a proportional increase in the probability of being chosen). To test for the validity of the IIA assumption with respect to the bidder's financing decision-making process, we apply the Hausman specification test (Hausman and McFadden, 1984).

Our multinomial logit model includes three binary logit models that are estimated simultaneously. Each binary logit predicts a probability of choosing one of the first three alternatives relative to the probability of opting for equity financing, which we choose as our benchmark alternative. The vector of explanatory variables x is the same across all three binary logits. For each alternative j , the log-odds ratio is specified as follows:

$$\ln \left[\frac{Pr_j}{Pr_0} \right] = x'(\beta_j - \beta_0) = x'\beta_j$$

Where Pr_j and Pr_0 denote the probabilities that the bidder chooses the alternative j relative to the benchmark alternative 0; x is a vector of exogenous, observable characteristics of the bidder, the target, and the bid; β_j is a vector of unknown regression parameters corresponding to the choice of the alternative j . We set the coefficients corresponding to the choice of the equity-financing alternative to zero (that is, $\beta_0 = 0$). The coefficients from each logit model represent the impact of an increase in a specific variable on the relative log-odds ratio.

4.1.2. Nested logit model of the sequential payment-financing decision

Since the financing and payment decisions of the bidder can be modelled as a 2-dimensional choice set and the choice of financing sources is likely to be conditioned by the payment method, we investigate the robustness of the multinomial logit model's conclusions with a nested logit framework. The advantage of the nested logit model over the multinomial logit is that the former is derived when the random noise in the value function has a generalized extreme value (GEV) distribution, which allows partial relaxation of the IIA property (Manski and McFadden, 1981). To specify the nested logit model, we partition the bidder's choice set into two branches: by payment method and by sources of transaction financing (as illustrated in Fig. 1).

In these models, we assume that when the bidder makes a financing choice, he first considers which means of payment he should offer in the takeover bid. Only subsequently, he decides on the sources of financing. Thus, the model estimates the unconditional probability Pr_P of opting for a specific payment method P , and the conditional probability $Pr_{f|P}$ of choosing a specific takeover financing source f (conditional on the chosen means of payment P). The unconditional probability of the financing/

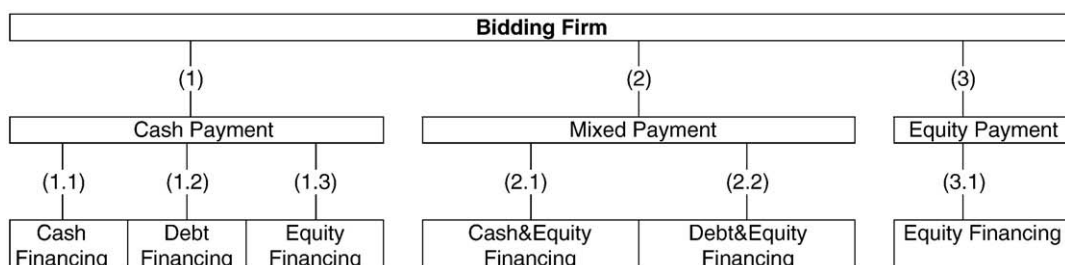


Fig. 1. Specification of the payment-financing nested logit model.

payment choice j which includes payment method P and funding source f is modelled as $Pr_j = Pr_{jp} = Pr_p Pr_{j|p}$. In this nested model, the IIA assumption is maintained for the sources of financing within the same payment method.

The nested logit model is estimated using the full information maximum likelihood estimation method. As is the case for the multinomial logit model, the estimated coefficients in the nested logit model are not directly interpretable with respect to the probability that a particular alternative is chosen. The coefficients from the model represent the increases (decreases) in the log-odds ratio (relative to the benchmark case).

4.2. Estimating the valuation effect of the bidder's financing choice

To capture the valuation effect of the bidder's financing choice, we compute the takeover announcement effect on the bidder's share price and compare it across deals financed by different types of capital. The market reaction to the takeover announcement is computed as a sum of the daily abnormal returns realized over the period starting 60 days prior to and ending 60 days subsequent the takeover announcement day. The event day is either the day of the announcement or the first trading day following the announcement in case the announcement is made on a non-trading day. We also consider alternative event windows within the $[-60, +60]$ interval to capture the pre-announcement and post-announcement effects. Daily abnormal returns are computed as the difference between realized and market model benchmark returns. The market model uses the MSCI-Europe index and the parameters are estimated over 240 days starting 300 days prior to the acquisition announcement. Our estimates of the abnormal returns are robust with respect to different choices of the market index (a local, European-wide, and worldwide index) and the estimation model of the benchmark returns (adjustment for mean-reversion (Blume, 1979), and non-synchronous trading (Dimson, 1979)). To test for significance of the estimated abnormal returns, we use two parametric test statistics (the portfolio test and the standardized test) as defined by Brown and Warner (1985), and the non-parametric test developed by Corrado (1989).

5. Results

5.1. The determinants of the bidder's financing decision: univariate analysis

Table 2 exhibits the mean values of the variables hypothesized to relate to the bidder's choice of financing sources and payment method in corporate takeovers (as outlined in Section 2). Sections 5.1.1 and 5.1.2 present the results of the univariate comparison of the subsamples stratified by the sources of financing. Section 5.1.3 discusses the comparison of subsamples partitioned on the basis of the means of payment. To test for differences in the mean values of variables across the subsamples, we employ an F -test (for level variables) and a Wald-test (for binary variables) and report the corresponding F - and χ^2 -statistics.

5.1.1. Cost of capital considerations

Pecking order and market timing

In line with the pecking order predictions, panel A of Table 2 reports that cash-rich bidders finance their M&As entirely with cash whereas firms with insufficient internally generated funds opt for external sources of financing. The ratio of the bidder's cash flow to the transaction value (CFLOW/TRANSVAL) is only 0.21 when debt financing is used, 0.32 when the deal is financed with equity, and 2.70 when the deal is entirely financed with internal funds. Unsurprisingly, debt is more prevalent in firms with more debt capacity. The financial leverage ratio (FIN LEVERAGE) is 0.40 for bidders that issue equity to fund M&As but it is only 0.34 for the firms that fund their deals with debt. Hence, these results strongly support the cost of capital conjecture $CC1(a)$. There is also some evidence that the equity financing decision is related to the prior share price performance of the bidder. The increase in the bidder's share price over the period -60 to -20 trading days relative to the initial announcement day (RUNUP) averages 2.21% when equity financing is involved, 1.96% when deal is financed with debt, and is insignificantly different from zero (at 0.34%) when internally generated cash is used. It should be noted that this run-up is already corrected for the strong upward equity market movement. These findings support the cost of capital conjecture $CC1(b)$. Furthermore, equity financing is more frequently used in the periods of the stock market recovery and boom (1993–1996 and 1997–1999, respectively) relative to the period with a stock market decline (2000–2001). Thus, firms rely on external sources of financing when internally generated funds are insufficient. They opt for debt when financial leverage is relatively low, but prefer equity financing when the stock market is booming and their shares outperform the market.

Regulatory environment

Panel A of Table 2 also examines whether specific sources of transaction financing are chosen in different regulatory environments. The choice of external sources of financing is related to better protection of shareholders' and creditors' rights, and to higher corporate transparency standards. The shareholder protection index adjusted for law enforcement (SH PRT $\times$ RULAW) averages 73.7 and 72.4 when the bidder uses debt and equity financing, respectively, and is only 58.3 when the bidder finances the deal entirely with internally generated funds. Similar patterns are observed with respect to the creditor protection index (CR PRT $\times$ RULAW): its values amount to 13.1 and 12.9 when debt financing and equity financing, respectively, are involved but only to 11.5 when financing occurs with internal cash. With regard to the corporate transparency standards (TRANSP $\times$ RULAW), debt financing and equity financing decisions are associated with the index values of 33.5 and 30.2, respectively, versus 26.4 when the firm decides to finance the takeover with internal funds. Notably, among the external sources of financing, debt is associated with

Table 2

The mean values of variables hypothesized to relate to the bidder's choice of financing sources and payment method in corporate takeovers.

Variables	Whole Sample	Cash Fin.	Debt Fin.	Debt and Equity Financing				Equity Financing				All Payment	Cash Payment	Mixed Payment			
		Cash Paymt	Cash Paymt	All Paymt	Cash Paymt	Mix Paymt	F-stat (p-val) H ₀ : (5) = (6)	All Paymt	Cash Paymt	Mix Paymt	Equity Paymt	F-stat (p-val) H ₀ : (9) = (10) = (11)	F-stat (p-val) H ₀ : (2) = (3) = (4) = (8)	F-stat (p-val) H ₀ : (2) = (3) = (5) = (9)	F-stat (p-val) H ₀ : (6) = (10)		
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
PANEL A: COST OF CAPITAL CONSIDERATIONS																	
							CC1. Pecking Order and Market Timing										
CFLOW/TRANSVAL	0.96	2.71	0.21	0.26	0.21	0.27	1.2 (.306)	0.32	0.52	0.81	0.14	4.9 ^a (.008)	6.7 ^a (.000)	12.4 ^a (.000)	8.5 ^a (.000)		
CHLDG/TRANSVAL	0.80	2.81	0.59	0.17	0.09	0.20	1.9 (.163)	0.36	0.67	0.61	0.16	5.2 ^a (.006)	7.3 ^a (.000)	11.7 ^a (.000)	6.5 ^a (.000)		
COLLATERAL	0.33	0.32	0.34	0.34	0.43	0.31	0.6 (.572)	0.34	0.35	0.32	0.35	0.8 (.452)	0.8 (.492)	3.5 ^b (.015)	1.3 (.282)		
FIN LEVERAGE	0.34	0.26	0.32	0.43	0.47	0.42	0.9 (.422)	0.40	0.34	0.35	0.46	3.7 ^b (.028)	23.2 ^a (.000)	8.6 ^a (.000)	4.5 ^a (.005)		
RUNUP (%)	0.92	0.34	1.96 ^y	2.01 ^y	5.41 ^z	−2.69 ^z	10.6 ^a (.000)	2.21 ^z	2.72 ^z	1.82 ^z	2.33 ^z	0.3 (.733)	3.4 ^b (.017)	7.2 ^a (.000)	9.8 ^a (.000)		
1993–1996	0.34	0.34	0.25	0.34	0.40	0.31	χ ² = 1.9 (.382)	0.39	0.43	0.41	0.37	χ ² = 2.3 (.319)	χ ² = 10.9 ^b (.012)	χ ² = 12.2 ^a (.007)	χ ² = 5.9 (.115)		
1997–1999	0.41	0.43	0.45	0.40	0.40	0.40	χ ² = 3.6 (.167)	0.39	0.45	0.38	0.39	χ ² = 3.3 (.192)	χ ² = 1.6 (.652)	χ ² = 1.7 (.630)	χ ² = 5.8 (.118)		
2000–2001	0.24	0.23	0.30	0.26	0.20	0.29	χ ² = 2.2 (.331)	0.22	0.12	0.21	0.24	χ ² = 4.7 ^c (.095)	χ ² = 6.1 (.104)	χ ² = 8.8 ^b (.032)	χ ² = 5.5 (.141)		
							CC2. Regulatory Environment										
SH PRT×RULAW	65.1	58.3	73.7	73.7	72.6	77.0	8.1 ^a (.000)	72.4	67.9	74.2	72.8	32.9 ^a (.000)	65.1 ^a (.000)	41.3 ^a (.000)	1.0 (.378)		
CR PRT×RULAW	12.2	11.5	13.1	13.0	12.6	13.1	2.2 (.120)	12.9	12.4	13.0	13.1	6.7 ^a (.001)	27.7 ^a (.000)	16.7 ^a (.000)	0.2 (.909)		
TRANSP×RULAW	29.4	26.4	33.5	33.5	32.5	35.4	5.1 ^a (.007)	30.2	30.0	33.2	28.4	21.7 ^a (.000)	54.0 ^a (.000)	34.8 ^a (.000)	2.3 ^c (.079)		
PANEL B: AGENCY PROBLEMS BETWEEN CLAIMANTS																	
							AG1. Agency Costs of Equity and Takeover Threat										
CONTROL (%)	29.9	35.3	23.6	18.6	17.4	19.5	0.7 (.494)	27.1	30.0	23.6	28.4	1.9 (.158)	12.9 ^a (.000)	5.2 ^a (.002)	0.8 (.489)		
BLOCKHLDR>20	0.55	0.67	0.39	0.32	0.23	0.34	χ ² = 1.5 (.463)	0.47	0.67	0.36	0.52	χ ² = 6.9 ^b (.032)	χ ² = 40.7 ^a (.000)	χ ² = 24.5 ^a (.000)	χ ² = 1.3 (.737)		
TO THREAT	0.06	0.05	0.02	0.05	0.08	0.04	1.0 (.369)	0.10	0.06	0.10	0.11	0.1 (.872)	4.2 ^a (.006)	1.3 (.292)	0.9 (.406)		
							AG2. Debt Overhang:										
Q-RATIO	1.81	1.61	2.00	1.63	1.64	1.57	0.2 (.652)	2.28	2.65	2.54	2.01	0.9 (.407)	4.2 ^a (.005)	2.9 ^b (.034)	5.5 ^b (.020)		
CAPX 3YGR (%)	8.5	8.5	4.4	9.4	3.8	14.4	7.2 ^a (.008)	26.7	33.1	19.5	34.7	3.8 ^b (.023)	6.7 ^a (.000)	8.5 ^a (.000)	0.4 (.766)		
SALES 3YGR (%)	24.2	21.8	24.3	23.5	20.2	25.6	4.1 ^b (.045)	31.6	25.2	39.3	27.3	2.6 ^c (.075)	5.8 ^a (.000)	0.6 (.650)	4.6 ^b (.033)		
TA 3YGR (%)	26.8	22.2	20.7	24.7	30.9	18.0	6.6 ^b (.011)	39.4	34.3	38.6	49.4	3.8 ^b (.023)	5.5 ^a (.001)	6.2 ^a (.000)	12.0 ^a (.000)		

(continued on next page)

Table 2 (continued)

Variables	Whole Sample	Cash Fin.	Debt Fin.	Debt and Equity Financing				Equity Financing				All Payment	Cash Payment	Mixed Payment	
		Cash Paymt	Cash Paymt	All Paymt	Cash Paymt	Mix Paymt	F-stat (p-val)	All Paymt	Cash Paymt	Mix Paymt	Equity Paymt	F-stat (p-val)	F-stat (p-val)	F-stat (p-val)	F-stat (p-val)
							H ₀ :				H ₀ :	H ₀ :			
							(5) = (6)				(9) = (10) = (11)	(2) = (3) = (4) = (8)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
AG3. Agency Cost of Debt and Financial Flexibility															
BETA	0.64	0.64	0.65	0.54	0.39	0.60	5.8 ^b (.017)	0.66	0.69	0.58	0.73	5.1 ^a (.006)	1.22 (.296)	4.2 ^a (.006)	0.0 (.991)
AGE	16.1	23.5	20.1	10.2	8.4	10.7	0.9 (.344)	7.4	5.3	18.0	3.6	9.4 ^a (.000)	7.6 ^a (.000)	11.5 ^a (.000)	2.3 (.130)
PANEL C: MEANS OF PAYMENT CONSIDERATIONS															
MP1. Risk Sharing:															
TRANSVAL (m US\$)	603	114	433	732	1106	568	8.4 ^a (.000)	1236	139	193	2290	11.1 ^a (.000)	13.3 ^a (.000)	7.2 ^a (.000)	5.2 ^b (.023)
(B) MVAL (m US\$)	2249	1952	4400	871	1172	761	12.5 ^a (.000)	2788	1385	513	3913	9.7 ^a (.000)	17.8 ^a (.000)	4.7 ^a (.003)	1.6 (.187)
RELVAL (%)	19.5	11.3	17.7	31.3	31.3	31.3	1.5 (.225)	23.3	18.8	19.9	32.9	22.1 ^a (.000)	23.1 ^a (.000)	2.8 ^b (.039)	11.4 ^a (.000)
MP2. The Threat of Control Change															
CONTROL THREAT (%)	10.6	6.7	8.9	20.3	19.8	20.6	1.1 (.297)	14.7	11.3	10.9	16.2	2.5 ^c (.085)	19.0 ^a (.000)	2.2 ^c (.087)	8.5 ^a (.000)
CONTROL<20	0.45	0.33	0.61	0.68	0.77	0.66	χ ² = 1.5 (.463)	0.53	0.33	0.65	0.48	χ ² = 6.9 ^b (.032)	χ ² = 40.7 ^a (.000)	χ ² = 24.5 ^a (.000)	χ ² = 1.3 (.737)
20<CONTROL<60	0.43	0.53	0.31	0.31	0.15	0.34	χ ² = 2.3 (.314)	0.37	0.50	0.31	0.38	χ ² = 1.5 (.468)	χ ² = 19.9 ^a (.000)	χ ² = 14.2 ^a (.003)	χ ² = 1.0 (.799)
CONTROL>60	0.12	0.14	0.08	0.01	0.08	0.00	χ ² = 4.9 ^c (.083)	0.10	0.17	0.04	0.14	χ ² = 6.8 ^b (.034)	χ ² = 10.0 ^a (.018)	χ ² = 2.1 (.546)	χ ² = 1.8 (.613)
(T) BLOCKHDR>20	0.90	0.94	0.70	0.84	0.78	0.89	χ ² = 3.6 (.166)	0.90	0.97	0.95	0.85	χ ² = 2.4 (.304)	χ ² = 50.9 ^a (.000)	χ ² = 49.2 ^a (.000)	χ ² = 5.2 (.157)
MP3. Characteristics of Acquisition															
CROSSBORDER BID	0.25	0.36	0.23	0.10	0.26	0.03	χ ² = 13.6 ^a (.001)	0.19	0.26	0.17	0.19	χ ² = 2.3 (.315)	χ ² = 56.0 ^a (.000)	χ ² = 8.2 ^b (.042)	χ ² = 12.3 ^a (.006)
TENDER OFFER	0.32	0.23	0.58	0.51	0.60	0.32	χ ² = 17.6 ^a (.000)	0.34	0.34	0.24	0.39	χ ² = 19.3 ^a (.000)	χ ² = 81.3 ^a (.000)	χ ² = 55.8 ^a (.000)	χ ² = 14.9 ^a (.002)
HOSTILE BID	0.05	0.05	0.10	0.10	0.14	0.07	χ ² = 7.1 ^a (.008)	0.04	0.04	0.03	0.04	χ ² = 0.1 (.932)	χ ² = 14.0 ^a (.003)	χ ² = 12.6 ^a (.006)	χ ² = 4.3 (.235)
LISTED TARGET	0.43	0.38	0.61	0.48	0.57	0.29	χ ² = 14.5 ^a (.000)	0.46	0.38	0.28	0.59	χ ² = 67.9 ^a (.000)	χ ² = 28.8 ^a (.000)	χ ² = 34.3 ^a (.000)	χ ² = 12.2 (.007)
INTRA-IND BID	0.65	0.65	0.69	0.64	0.73	0.54	χ ² = 5.2 ^b (.023)	0.65	0.65	0.60	0.67	χ ² = 3.3 (.188)	χ ² = 3.0 (.385)	χ ² = 1.7 (.645)	χ ² = 1.7 (.632)
Number of obs.	1361	590	173	139	42	97	139	459	49	162	248	459	1361	854	259

This table reports the mean values of variables hypothesized to relate to the bidder's choice of financing sources and the means of payment. The variables are defined as follows. CFLOW/TRANSVAL = cash flow / transaction value; CHLDG/TRANSVAL = cash holdings / transaction value; COLLATERAL = tangible assets of the combined firm; FIN LEVERAGE = financial leverage ratio; RUNUP = the price run-up prior to the announcement; 1993–1996, 1997–1999, and 2000–2001 = the dummy variables for the respective time periods; SH PRT $\times$ RULAW = shareholder rights protection index $\times$ rule of law index; CR PRT $\times$ RULAW = creditor protection index $\times$ rule of law index; TRANSP $\times$ RULAW = transparency index $\times$ rule of law index; CONTROL = voting stake owned by the bidder's largest shareholder; BLOCKHDR>20 = indicator equals one if the bidder's largest blockholder has a voting stake of more than 20%; TO THREAT = the bidder's exposure to the takeover market; Q-RATIO = Tobin's Q; CAPX 3 YGR = 3 year growth rate in capital expenditure; SALES 3 YGR = 3 year growth rate in sales; TA 3 YGR = 3 year growth rate in total assets; BETA = systematic risk; AGE = number of years since incorporation; TRANSVAL = transaction value; (B) MVAL = bidder's market capitalization; RELVAL = transaction value divided by the transaction value and the market value of the bidder; CONTROL THREAT = target's largest controlling share block multiplied by RELVAL; CONTROL<20 = indicator equals one if there is no blockholder in the bidding firm owning more than 20% of the voting rights; 20<CONTROL<60 = indicator equals one if the bidding firm is controlled by a blockholder owning more than 20 but less than 60% of the voting rights; CONTROL>60 = indicator equals one if the bidding firm is controlled by a large blockholder owning 60% or more of the voting rights; (T) BLOCKHDR>20 = indicator equals one if the target's largest blockholder has a voting stake of more than 20%; CROSSBORDER BID = indicator equals one if the bid is on a foreign company; TENDER OFFER = indicator equals one if the bid is in a form of tender offer; HOSTILE BID = indicator equals one if the bid is initially opposed by the target firm's management; LISTED TARGET = indicator equals one if the target firm is listed on a stock exchange; and INTRA-IND BID = indicator equals one if the bid is on company of the same industry. More detailed definition of variables is given in Appendix A. To assess the significance of the estimated run-up premium, RUNUP (%), we perform a non-parametric test (Corrado, 1989). Where the estimated premium is statistically significant at the 1%/5%/10% level, we indicate this with z/y/x, respectively. Columns (7) and (12) report an F-test (for level variables) and a Wald test (for binary variables) for the difference in means across acquisitions with different means of payment (but the same sources of transaction financing). Columns (13), (14), and (15) report an F-test (for level variables) and a Wald test (for binary variables) for the difference in means across acquisitions with different sources of financing (but the same means of payment). Superscripts a/b/c correspond to the statistical significance at the 1%/5%/10% level, respectively.

somewhat better shareholder and creditor protection and higher transparency standards. Our overall results support conjectures CC2 (a) and (b), namely the view that better legal investor protection facilitates the use of external sources of financing. When creditor rights are well protected, companies do indeed tend to opt for debt to finance their M&As. However, we find no evidence that firms prefer equity to debt financing when shareholder protection is high.

5.1.2. Agency problems between corporate claimants

Agency costs of equity and takeover threats

The takeover financing decision is related to the bidding firm's ownership structure. Financing with internal funds is more frequently used when the bidder's largest shareholder owns 20% or more of the firm's shares (panel B of Table 2). In contrast, firms with a dispersed ownership structure tend to finance acquisitions more frequently with equity. Seventy-six percent of the cash-financed takeovers are made by firms controlled by a blockholder (i.e. $\text{BLOCKHLD} > 20 = 1$), while 53% of equity-financed M&As are made by widely-held firms (i.e. firms without a blockholder owning at least 20% of the shares). Although part of this relation may be determined by the bidder's size (for which we control in the multivariate analysis of Section 5.2), our univariate comparison suggests that the choice of equity financing is driven in some acquisitions by managerial self-interest (Jensen and Meckling, 1976), as efficient monitoring of the management is lower in widely-held firms. This finding supports conjecture AG1(a).

Strikingly, among the bidders that finance their takeovers with debt, companies with a dispersed ownership structure dominate (61% of cases). The preference for debt financing by companies with a dispersed ownership structure may also result from the fact that these companies are more vulnerable to a takeover threat than their closely-held peers. Entrenched managers of widely-held firms may voluntarily signal their commitment to shareholder value creation by adopting debt financing in order to constrain their discretion over corporate funds. This way, they reduce the likelihood that their company will be subject to a disciplinary takeover (Zwiebel, 1996; Franks et al., 2001). This explanation is not, however, borne out by our data. The estimated likelihood of being acquired (TO THREAT) is 0.02 for bidders issuing debt, which is significantly lower than 0.05 for firms that finance M&As with internal funds, and 0.10 for bidders issuing equity. We therefore reject conjecture AG1(b).

Debt overhang

Bidding firms that opt for equity financing tend to have higher growth opportunities, which supports conjecture AG2. The bidder's Q-ratio is 2.28 in equity-financed deals, 2.00 when debt financing is involved, and 1.61 in cash-financed deals (panel B of Table 2). The differences are statistically significant. When accounting-based measures of growth opportunities are considered, the differences are even more pronounced: equity issuers have the highest average growth rate in capital expenditures (CAPX 3YGR), sales (SALES 3YGR), and total assets (TA 3YGR) over the 3 years prior to the year of the acquisition. The pattern is consistent with Myers (1977) debt overhang hypothesis: firms with high growth potential avoid debt financing to minimize the scope of underinvestment.

Agency cost of debt and financial flexibility

The results reported in panel B of Table 2 also support (albeit weakly) the agency costs of debt conjecture AG3(a): (i) Debt financing is more likely when the bidding firm is less risky (see BETA) and is used in takeovers by more mature firms (see AGE). In contrast, equity financing prevails in M&As performed by relatively young (and hence more risky) firms. The bidder's equity beta (BETA) of 0.65 in debt-financed M&As is a little lower than that of equity-financed deals (0.66), although the difference is not statistically significant.

5.1.3. Means of payment considerations

Whereas panels A and B of Table 2 focus on the determinants of the *financing decision*, panel C shows the mean values of variables we expect to determine the *means of payment choice*.

Risk sharing

Hansen (1987) predicts that acquirers of relatively large targets pay with equity in order to share the risk of the takeover with the target's incumbent shareholders. In line with this prediction MP1, panel C of Table 2 shows that all-equity payments are offered in M&As with an average value of \$2290 mln (see TRANSVAL), while the average value of takeovers with all-cash or mixed offers ranges between \$114 mln and \$1106 mln. Among the M&As financed with equity, the transaction value of equity-paid deals (\$2290 mln) is more than 10 times the value of cash-paid and mixed-paid M&As (\$139 mln and \$193 mln, respectively). The difference is also significant when we consider the relative size of the takeover: the ratio of the transaction value to the bidder's market value (RELVAL) is 32.9% when the bidder pays with equity, and 18.8% when the bidder pays with cash (financed by an equity issue). An even lower relative size (of 11.3%) is observed in M&As involving cash payments financed with internal funds.

The threat of control change

Concerns about corporate control retention by the bidding firm's shareholders have a significant impact on the choice of the payment method (panel C of Table 2). If control of the target company is concentrated in the hands of a large blockholder, an equity payment may create a new blockholder in the bidding firm with an average equity stake of 16.2% (see CONTROL THREAT). In contrast, if the cash-paid M&As (financed with equity) would have been entirely paid with equity instead, the target's largest incumbent blockholder could receive an average stake of 11.3% in the merged firm. This percentage is even lower for cash-paid M&As financed with internal funds (at 6.7%).

The emergence of a new controlling shareholder with a block of 16.2% in all-equity acquisitions should be of little concern to the shareholders of the following two subsamples of firms making all-equity offers: those with low and intermediate levels of control concentration. Forty-eight percent of bidders making an all-equity offer have no large controlling blockholders (i.e. 'CONTROL<20' = 1). Another 14% are controlled by blockholders holding a supermajority-voting stake (i.e. 'CONTROL>60' = 1) whose control positions are hardly challenged by the emergence of a new blockholder. The threat of a control change as a result of an equity payment is a more serious concern for shareholders holding an intermediate level of voting power. Indeed, panel C of Table 2 shows that these firms are more likely to offer a cash payment: bidders controlled by blockholders holding a combined stake within the 20–60% range (i.e. '20<CONTROL<60' = 1) make 50% of the cash-paid M&As that are financed with equity and 53% of the cash-paid takeovers that are financed with internal funds. In contrast, only 38% of the equity-paid M&As involve bidders with an intermediate concentration of control. This evidence is in line with the predictions of the control threat conjecture MP2: the bidder's management prefers cash over equity as a means of payment if an equity issue threatens the control of their largest shareholders.

Characteristics of the acquisition

Finally, we explore whether the characteristics of the takeover vary significantly with the payment method. Overall, 25% of the acquisitions are cross-border (i.e. CROSSBORDER BID = 1) but this percentage increases to 36% for M&As involving internally financed cash payments. The lowest percentage of cross-border M&As is among equity-paid deals (19%). The public status of the target firm also appears to be relevant to the payment choice (see LISTED TARGET). Equity-paid acquisitions occur more frequently for firms listed on a stock exchange (59% of the cases), while cash-paid M&As happen more frequently when non-listed targets are involved (62% of the cases). The payment method does neither appear to be related to the form of the bid (TENDER OFFER), nor to how it is received by the target's board of directors (HOSTILE BID), or to the degree of industry diversification of the merger (INTRA-IND BID).

5.2. The determinants of the bidder's financing decision: multivariate analysis

5.2.1. Multinomial logit model

Whereas the conclusions in the above section are based on univariate analyses, we now explore the combined effect of the characteristics of target and bidding firms and of the takeover bid itself on the takeover financing structure. As Section 4.2 describes, two econometric techniques qualify to model the bidder's financing decision: multinomial logit and nested logit regressions.

The multinomial logit assumes that the bidder opts for a source of financing from four mutually exclusive (independent) alternatives: cash, debt, debt-and-equity, and equity. As mentioned above, many of the deals financed with external capital are also partially financed with internally generated funds. For reasons of conciseness, we label these transactions by the type of external funding; e.g. a transaction financed with debt and equity can also be financed with some internally generated funds. Hence, our model contains three binary logits that predict the probability that a particular source of financing is chosen in relation to equity financing (our benchmark). In order to examine the validity of the multinomial logit model we conduct several Hausman specification tests. In each test, we exclude different financing alternatives from the sample and test whether their exclusion leads to a proportionate increase in the probability of the other alternatives. As the tests fail to reject the assumption of the independence of irrelevant alternatives (IIA), we consider a multinomial logit model to be an appropriate specification for the bidder's financing choice.¹⁵

Column 1 of Table 3 presents the logit model estimating the probability that an acquisition is financed with cash (relative to equity financing). Consistent with the pecking order hypothesis (CC1), our proxies for the bidder's internal financing capacity are statistically significant. Specifically, the likelihood of cash financing increases with the bidder's internally generated cash flow (CFLOW/TRANSVAL). However, firms opt to raise capital via the stock market, rather than employ internal funds when they experience significant share price increases prior to the bid announcement (RUNUP). This implies that short term market timing influences the financing decision. Neither the stock market boom (1997–1999) nor the decline (2000–2001) seems to have much influence on the use of equity financing. The results presented in column 2 of Table 3 concerning the likelihood of debt (versus equity) financing provide further confirmation of the pecking order hypothesis: firms with high debt capacity (e.g. high COLLATERAL) prefer borrowing to an equity issuance to fund M&As.

The regulatory environment hypothesis (CC2) is also supported by our data. Column 1 of Table 3 shows that acquisitions financed by equity (relative to those financed by cash) are more likely in countries with stronger protection of shareholder rights (SH PRT × RULAW). The evidence is in line with the prediction that strong shareholder protection reduces the cost of equity capital and hence increases the attractiveness of equity as a source of financing. Also, when the creditor rights protection is high (CR PRT × RULAW), bidders prefer debt over equity financing (columns 2 and 3 of Table 3). These results suggest that the legal protection of shareholders and creditors affects the costs of debt and equity capital, and thereby induces systematic corporate preferences for the most appropriate (less expensive) source of financing.

¹⁵ However, the IIA assumption no longer holds when we consider the bidder's simultaneous choice between six possible payment/financing alternatives: (i) cash payment/cash financing; (ii) cash payment/debt financing; (iii) cash payment/equity financing; (iv) mixed payment/equity financing; (v) mixed payment/equity&debt financing; and (vi) equity payment/equity financing. We will deal with all the combinations of payment and financing in Section 5.2.3 and Table 4 where we apply a nested logit structure.

Table 3

Multinomial logit model predicting the bidder's financing choice.

Explanatory variables	CASH Financing (vs EQUITY Financing) (1)		DEBT Financing (vs EQUITY Financing) (2)		DEBT & EQUITY Financing (vs EQUITY Financing) (3)	
	Coeff	Pr > χ^2	Coeff	Pr > χ^2	Coeff	Pr > χ^2
INTERCEPT	– 6.15 ^a	.003	– 7.69 ^a	.004	– 9.22 ^a	.002
Cost of Capital (CC1). Pecking Order and Market Timing						
CFLOW/TRANSVAL	0.03 ^c	.061	0.05	.744	– 0.07 ^c	.086
COLLATERAL	1.64 ^b	.046	1.72 ^b	.042	1.68	.177
FIN LEVERAGE	0.33	.802	0.24	.406	– 0.19	.767
RUNUP	– 0.26 ^b	.035	– 0.12	.562	– 0.48 ^c	.092
1997–1999	0.22	.312	– 0.11	.327	– 0.30	.550
2000–2001	0.04	.794	0.34	.104	0.12	.614
Cost of Capital (CC2). Regulatory Environment						
SH PRT × RULAW	– 0.08 ^a	.000	– 0.04	.262	– 0.03	.574
CR PRT × RULAW	0.24	.308	0.14 ^b	.020	0.17 ^b	.038
TRANSP × RULAW	– 0.05	.560	– 0.06	.303	– 0.01	.898
Agency Costs (AG1). Agency Cost of Equity and Takeover Threat						
BLOCKHLDR > 20	0.56	.436	0.53	.602	0.49	.829
TO THREAT	– 1.18	.210	– 1.09	.338	– 1.67	.294
Agency Costs (AG2). Debt Overhang and AG3. Agency Cost of Debt and Financial Flexibility						
Q-RATIO	– 0.06 ^b	.043	– 0.03	.253	– 0.14 ^b	.047
BETA	0.32	.611	– 0.24	.662	– 0.03	.870
AGE	0.03	.705	0.04	.655	0.01	.937
Means of Payment (MP1). Risk Sharing						
MVAL (log)	– 0.04	.480	0.25 ^a	.006	0.32 ^a	.004
RELVAL	– 3.63 ^a	.000	– 2.40 ^c	.065	1.34 ^b	.018
Means of Payment (MP2). The Threat of Control Change						
CONTROL THREAT	0.17	.149	0.15 ^c	.074	0.11 ^c	.058
20 < CONTROL < 60	1.83 ^b	.032	0.56	.385	0.94	.506
Means of Payment (MP3). Characteristics of Acquisition						
CROSSBORDER BID	0.04	.959	0.24	.533	– 1.74 ^a	.006
TENDER OFFER	0.15	.366	0.36	.486	0.04	.897
HOSTILE BID	1.28 ^b	.025	1.36 ^b	.039	0.87	.156
LISTED TARGET	– 0.38	.153	– 0.20	.909	– 1.47 ^c	.063
INTRA-IND BID	– 0.04	.815	– 0.15	.758	– 0.08	.721

The table reports the estimates of a multinomial logit model that describes the bidder's choice of the financing method in corporate takeovers. Four possible choices are considered: (i) cash financing (cash-paid/cash-financed deals); (ii) debt financing (cash-paid/debt-financed deals); (iii) equity-and-debt financing (cash-paid/equity&debt-financed and mixed-paid/equity&debt-financed deals); and (iv) equity financing (equity-paid/equity-financed, cash-paid/equity-financed, and mixed-paid/equity-financed deals). The multinomial logit model includes three binary logit models. Each binary logit predicts a probability of choosing one of the first three alternatives relative to the probability of choosing the benchmark, which is all-equity financing. A Wald test is used to test for significance of the estimated coefficients and the overall regression; the *p*-value of the Wald Chi-square statistic is reported (Pr > χ^2). a/b/c stand for statistical significance at the 1%/5%/10% level, respectively. Statistically significant coefficients are denoted in bold. The total sample consists of 1361 acquisitions and includes 459 acquisitions financed by equity. The Chi-square statistic on the significance of the overall model is significant at the 0.0001% level. The explanatory variables are defined as follows. CFLOW/TRANSVAL = cash flow / transaction value; COLLATERAL = tangible assets of the combined firm; FIN LEVERAGE = financial leverage ratio; RUNUP = the price run-up prior to the announcement; 1997–1999 and 2000–2001 = the dummy variables for the respective time periods; SH PRT × RULAW = shareholder rights protection index × rule of law index; CR PRT × RULAW = creditor protection index × rule of law index; TRANSP × RULAW = transparency index × rule of law index; BLOCKHLDR > 20 = indicator equals one if the bidder's largest blockholder has a voting stake of more than 20%; TO THREAT = the bidder's exposure to the takeover market; Q-RATIO = Tobin's Q; BETA = systematic risk; AGE = number of years since incorporation; MVAL = bidder's market capitalization; RELVAL = transaction value divided by the transaction value and the market value of the bidder; CONTROL THREAT = target's largest controlling share block multiplied by equity; 20 < CONTROL < 60 = indicator equals one if the bidding firm is controlled by a blockholder owning more than 20 but less than 60% of the voting rights; CROSSBORDER BID = indicator equals one if the bid is on a foreign company; TENDER OFFER = indicator equals one if the bid is in a form of tender offer; HOSTILE BID = indicator equals one if the bid is initially opposed by the target firm's management; LISTED TARGET = indicator equals one if the target firm is listed on a stock exchange; and INTRA-IND BID = indicator equals one if the bid is on company of the same industry. More detailed definition of variables is given in [Appendix A](#).

The multinomial logit analysis does not support the hypotheses on the agency costs of equity and on the takeover threat (AG1 (a) and (b)). The estimates for the likelihood of debt (versus equity) financing in column 2 of [Table 3](#) reveal that neither the presence of a large blockholder (i.e. 'BLOCKHLDR > 20' = 1) nor the threat of being acquired (i.e. high TO THREAT) has a significant impact on the bidder's decision to borrow in order to fund an acquisition.

Both columns 1 and 2 of [Table 3](#) demonstrate that the probability of equity financing (versus cash and debt financing, respectively) increases with the Q-ratio of the bidding firm (see Q-RATIO). This implies that companies with strong growth opportunities prefer financing M&As with equity in order to avoid conflicts of interests between shareholders and debtholders (hypothesis AG2). There is no evidence that risky firms (as proxied by BETA and AGE) systematically prefer equity financing (conjecture AG3). Therefore, we conclude that the decision to issue equity is unlikely to be influenced by the agency problems of debt.

The bidder's strategic preferences for specific types of means of payment may induce systematic preferences for specific types of financing. Consistent with the risk-sharing hypothesis (MP1), columns 1 and 2 of [Table 3](#) reveal that the likelihood of equity

financing (relative to both cash and debt financing) increases with the relative size of the takeover (see RELVAL). That is, when a sizeable firm acquires a smaller firm, there is less need to share the risk of the transaction with the target's shareholders by means of an equity offer. In contrast, funding with internal cash or borrowing is preferred to issuing equity when the bidding firm is vulnerable to the threat of control change. Column 1 of Table 3 shows that bidders are more likely to use cash (versus equity) financing if their largest shareholders control an intermediate voting stake (i.e. $20 < \text{CONTROL} < 60 = 1$) which could be eroded by an equity payment to the shareholders of a closely held target firm. Further, as reported in column 2 of Table 3, the likelihood of debt (versus equity) financing increases with the percentage of shares that the target's largest blockholder would get in the combined firm if the M&A would be entirely paid with equity (see CONTROL THREAT). A similar conclusion can be drawn from column 3. The evidence is consistent with the threat of control change hypothesis (MP2): the threat of a change in the firm's control structure makes the bidding firm averse to all-equity payments.

The relative size of the target firm and the potential control change are not the only takeover characteristics that affect the bidder's choice of financing sources (or the payment method). The choice of financing (payment) method also depends on how the takeover bid is received by the target (if the acquisition is opposed by the target's board or an offer is made directly to the target's shareholders – i.e. HOSTILE BID = 1). Consistent with the view that a cash payment increases the probability of the hostile bid's success (hypothesis MP3), columns 1 and 2 of Table 3 show a positive relationship between the bid hostility and the choice of internal cash and debt financing (and hence a cash payment). However, other transaction-specific characteristics such as cross-border expansion, tender offer, listed target, and M&A within same industry do not appear to have a consistent impact on the financing (and payment) decision.

To summarize, the results of our multinomial logit analysis suggest that equity issues take place for reasons of cost of capital considerations: our hypotheses on the pecking order, market-timing, and financiers' protection cannot be rejected. The threat of possible underinvestment due to debt overhang in the bidding firm also plays an important role in the choice of equity financing. Finally, we also find support for the hypothesis that the bidder's decision on the financing sources depends on the preference for a specific payment method, which is in itself determined by the threat of a control change resulting from an equity-financed takeover.

5.2.2. Nested logit model of the sequential payment-financing choice

The nested logit model extends the multinomial logit framework by allowing the bidder to make its financing decision conditional on the preferred payment method. Columns 1 and 2 of Table 4 report the estimates from the unconditional logit model of the probability that a takeover involves, respectively, a cash or a mixed payment (relative to equity payment). Our results are similar to those of Faccio and Masulis (2005), who provide a comprehensive analysis of the determinants of the payment method in European corporate takeovers. The likelihood of an equity (versus cash) payment increases with the bidder's share price run-up prior to the deal announcement and the relative size of the takeover. An equity offer is also more likely when the bid is made for a listed target firm. However, concerns regarding the potential change in the firm's control structure drive the bidder's decision to offer cash (rather than equity). These concerns mainly arise for the bidders whose control structure may change significantly if a new large shareholder emerges as a result of an equity payment; namely, for widely-held firms (i.e. $\text{CONTROL} < 20 = 1$) and firms controlled by a blockholder with an intermediate level of voting rights (i.e. $20 < \text{CONTROL} < 60 = 1$).¹⁶ A cash offer is also more likely in cross-border acquisitions and hostile takeovers. Our results suggest that the regulatory environment has no influence on the payment method in corporate takeovers.

The difference between our results and those of Faccio and Masulis (2005) is that we do not find a significant or consistent relationship between the bidder's financial condition (e.g. cash flows and leverage) and the means of payment. However, we find that the bidder's financial condition has a significant impact on the financing decision. Columns 3 and 4 of Table 4 report the estimates from the logit model for the bidder's financing decision conditional on an all-cash offer. Column 5 complements this analysis with the model for the choice between debt-and-equity and cash-and-equity financing conditional on a mixed offer.

Most of the results of the second (conditional) stage of the nested logit model reported in columns 3 and 4 in Table 4 are similar to those of the multinomial logit model shown in columns 1 and 2 of Table 3. Specifically, the nested logit model confirms that the likelihood of financing with internal funds (versus equity) increases with the bidder's cash flow, whereas debt financing is more likely to be used (relative to equity financing) when the bidder has higher collateral and when the stock market conditions deteriorate (i.e. in the period 2000–2001).¹⁷ Good stock performance prior to the bid (i.e. high RUNUP) and the large size of the bidding firm (high MVAL) lead to equity financing in cash-paid M&As. Also, the negative coefficient on the variable SH PRT x RULAW in column 4 of Table 4 confirms that better legal protection of shareholder rights induces a lower cost of equity capital, so that companies are more likely to

¹⁶ As a robustness check, we reduce the control threshold from 20% to 10% and re-define the bidder's control structure: a widely-held company has no blockholders with at least 10% of voting rights; intermediate control arises if a blockholder holds a voting stake [10%, 50%]; and majority control signifies that a blockholder has a stake of 50% or more. The decrease in the control threshold does not materially change the results of the nested logit with respect to the financing decisions. It affects nevertheless the results with respect to the choice of cash (versus equity) payment: whereas the coefficient on the intermediate control indicator variables improves its significance, the coefficient for the dispersed ownership structure is no longer significant. This confirms that a threat of a control change is a serious concern for firms with intermediate control concentration. These firms prefer to pay with cash rather than equity to avoid the dilution of the voting power of the incumbent blockholder. However, the threat is no longer significant for widely held firms in which no blockholder owns at least 10%, suggesting that managers of these firms are less concerned about the emergence of a new blockholder in the combined firm.

¹⁷ As a robustness check, we replace the indicator variables for the stock market recovery (93–96) and boom (97–99) and the decline (2000–2001) by the total and monthly average MSCI-Europe index returns over the period of 6 months prior to the takeover bid as a proxy for the stock market performance. Both variables are positively and significantly related to the choice of equity payment and financing. The evidence suggests that bidder's managers interpret increasing market returns as a sign of stock market recovery and regard this as a favourable circumstance for an equity issue. This effect was not captured by the dummy variables of the stock market recovery (93–96) and boom (97–99) as these variables are based on an ex-post assessment of the stock market conditions.

Table 4

Nested logit model: the payment-financing choice.

Explanatory variables	First stage: Choice of the payment method				Second stage: Choice of the sources of financing Conditional on the payment method					
	CASH Payment (vs. EQUITY Paymt)		MIXED Payment (vs. EQUITY Paymt)		CASH Financing (vs. EQUITY Financing)		DEBT Financing (vs. EQUITY Financing)		Mixed payment: DEBT and EQUITY Financing (vs. EQUITY Financing)	
	(1)		(2)		(3)		(4)		(5)	
	Coeff.	Pr> t	Coeff.	Pr> t	Coeff.	Pr> t	Coeff.	Pr> t	Coeff.	Pr> t
INTERCEPT	3.14^b	.012	− 5.36^b	.036	4.01^c	.064	− 15.10^a	.004	− 3.48	.465
Cost of Capital (CC1), Pecking Order and Market Timing										
CFLOW/TRANSVAL	0.02	.361	− 0.04^b	.017	0.17^a	.006	0.05	.482	− 0.17^a	.006
COLLATERAL	1.36	.207	0.26	.856	− 0.65	.537	0.71^c	.058	2.74^b	.032
FIN LEVERAGE	0.45	.697	1.02	.338	1.64	.352	− 0.79	.401	− 1.95^b	.029
RUNUP	− 0.06^b	.027	− 0.18	.510	− 1.12^b	.018	− 0.04	.764	− 1.73^b	.060
1997–1999	− 0.08	.714	− 0.39	.544	− 0.30	.588	− 0.76	.625	0.06	.957
2000–2001	0.21	.306	− 0.05	.787	1.08	.335	1.17^c	.053	1.15^c	.086
Cost of Capital (CC2), Regulatory Environment										
SH PRT×RULAW	− 0.04	.611	− 0.02	.524	− 0.12^b	.014	− 0.15^c	.072	0.08	.506
CR PRT×RULAW	− 0.01	.983	0.01	.806	0.07	.729	0.36^b	.021	0.08	.303
TRANSP×RULAW	− 0.05	.222	− 0.07	.141	− 0.04	.460	− 0.02	.533	0.02	.755
Agency Costs (AG1), Agency Cost of Equity and Takeover Threat										
BLOCKHLD<20					− 0.42	.505	0.63	.349	0.34	.589
TO THREAT					− 2.16	.560	− 4.04	.708	− 2.62	.316
Agency Costs (AG2), Debt Overhang and Ag3, Agency Cost of Debt and Financial Flexibility										
Q-RATIO					− 0.08	.127	− 0.12	.300	− 0.22^b	.046
BETA					1.14	.451	1.52^c	.087	− 0.81	.634
AGE					0.01	.402	0.06	.256	0.00	.905
Means of Payment (MP1), Risk Sharing										
MVAL (log)	− 0.11	.226	− 0.08	.356	− 0.23^a	.008	0.16	.158	0.52^a	.002
RELVAL	− 4.14^a	.000	− 2.27^b	.011	− 3.10	.504	− 1.62	.363	2.56^c	.064
Means of Payment (MP2), The Threat of Control Change										
CONTROL THREAT	0.05	.387	0.08	.163	− 0.08	.562	0.17	.446	− 0.15	.588
20<CONTROL<60	3.28^b	.028	1.17	.518	0.50	.255	− 0.26	.724	0.22	.630
CONTROL<20	1.74^b	.039	− 0.51	.730						
Means of Payment (MP3), Characteristics of Acquisition										
CROSSBORDER BID	0.29^a	.000	− 0.42	.405	− 0.38	.412	− 0.53	.214	− 2.69^b	.017
TENDER OFFER	0.15	.544	− 0.07	.789	− 0.45	.207	0.77	.749	0.89	.450
HOSTILE BID	1.24^b	.031	0.86^c	.074	0.41	.443	0.48	.338	− 1.24	.315
LISTED TARGET	− 0.69^a	.000	− 0.97^c	.083	0.35	.675	1.02	.160	− 1.30	.418
INTRA-IND BID	− 0.24	.356	− 0.17	.536	− 0.09	.557	− 0.34	.751	− 0.08	.954

This table presents the estimates of a nested logit regression that predicts the unconditional probability of choosing a payment method and, conditional on the payment method choice, the probability of opting for a particular source of financing of corporate takeovers. In other words, the first stage of the decision is the choice of the payment method. The second stage is the choice of financing sources conditional on the payment method. The sample comprises 1361 acquisitions. Variable definitions are given in Table 3 and in Appendix A (which gives the detailed definitions). The Chi-square statistic on the significance of the overall is significant at the 0.0001% level. a/b/c stand for statistical significance at the 1%/5%/10% level, respectively.

finance their activities with equity. However, column 5 of Table 4 shows that better protection of creditor rights (i.e. high CR PRT × RULAW) makes the cost of debt relatively low compared to equity thereby encouraging firms to use debt instead of equity financing. Notably, none of the takeover characteristics and variables intended to proxy for the threat of a control change has significant explanatory power for the sources of financing choice conditional on an all-cash offer. The reason is that the control threat is only indirectly important for the financing of the transaction, namely through the choice of the payment method.

The analysis of the choice between cash and equity financing and debt and equity financing of mixed offers reveals some interesting additional results (see column 5 of Table 4). The cash component of the mixed offers is more likely to be funded with debt (rather than with internal cash) when the bidder's internal funds are insufficient (low CFLOW/TRANSVAL), debt capacity is high (i.e. high COLLATERAL value and low FIN LEVERAGE), growth opportunities are poor (low Q-RATIO), and the takeover is preceded by a significant decline in the share price of the bidding firm (low RUNUP). Interestingly, the cash component of the mixed payment in cross-border bids appears to be financed with internal funds, which suggests that bidders acquiring foreign companies may have more difficulties to raise funds via borrowing.¹⁸

An important conclusion following from the analysis of the nested logit results is that the decisions on the means of payment and on the sources of financing are driven by different factors. The first stage of the nested logit model shows that bidding firms use the means of payment as a tool to reduce the risks associated with the takeover transaction such as the risk of the target firm's

¹⁸ It should be noted that this result refers to the financing (not payment) choice of the bidding firm. The results reported in column 5 of Table 3 are already corrected for the bidder's preferences of specific payment methods.

misvaluation, the threat of a control change, and the risk of the bid's failure (see columns 1 and 2 of Table 4). None of these factors have a significant impact on the bidder's financing decision when it is conditioned on the means of payment. Instead, the second stage of the nested logit model reveals that the financing decision is influenced by the cost of capital at the firm level and at the country level (through corporate governance regulation) (see columns 3, 4, and 5 of Table 4). As the financing/payment choices may have different implications for the value of the bidding firm, we investigate this issue in the next section.

5.3. Valuation effect of the bidder's financing and payment decisions

The valuation effects of the payment/financing choices in corporate takeovers are exhibited in Table 5 and Figs. 2 and 3. They show the evolution of the cumulative average abnormal returns (CAARs) for bidding firms over a six-month period starting 60 days prior to and ending 60 days after the initial bid announcement day. When we stratify our sample by the means of payment (see Fig. 2), we find that over the six-month window centred around the takeover bid announcement day, the takeover returns to the bidder's shareholders are significantly negative in takeovers involving equity payments (all-equity and mixed offers). The evidence is consistent with prior empirical findings (see e.g. Moeller et al., 2004; Andrade et al., 2001; Franks et al., 1991). However, the underperformance of those offers is largely due to the post-announcement share price correction. Prior to the bid, all-equity offers experience a significant share price run-up, exceeding that of all-cash offers.

The analysis of the subsamples stratified by sources of transaction financing (see Fig. 3) reveals that a negative price revision follows the announcement of any corporate takeover that involves equity financing. Remarkably, the only type of M&As that does not have a negative post-announcement price correction is a debt-financed acquisition (see Table 5). Over the $[-60, +60]$ event window debt-financed acquisitions are expected to create a substantial value (of about 3%) to the bidding firms, which significantly exceeds the negative returns of M&As financed by equity and cash (-3.4% and -0.1% , respectively). A similar positive market reaction to debt-financed M&As is documented in Bharadwaj and Shivdasani (2003). The evidence confirms that investors consider a bank's agreement to provide funding as a positive signal about takeover profitability. Also, investors may interpret the debt financing decision as a confirmation that the bidder's shares are not overvalued.

Table 5 and Fig. 3 show that acquisitions financed with internally generated funds underperform debt-financed deals on the announcement day (0.79% versus 1.32%, respectively) and the former trigger significant negative share price revisions (of -1.35%) over the 3-month post-announcement period. This may be due to investor concerns that cash-financed deals may be driven by managerial empire building motives. Our results also support the view that an equity issue conveys a signal that the firm's shares may be overvalued, which in turn triggers an adverse revaluation effect (Moeller et al., 2004; Andrade et al., 2001). In addition to the significant share price decline (-5.73%) over the 3-months period after the deal announcement, all-equity-financed M&As are associated with substantially lower announcement returns (0.49%) compared to the deals financed with cash and debt (0.79% and 1.32% respectively).

Table 5
Cumulative average abnormal returns for bidding firms by sources of financing.

	Pre-announcement period [−60, −2]		Announcement period [−1, +1]		Post-announcement period [+2, +60]		Nr. obs
	CAARs %	(t-stat)	CAARs %	(t-stat)	CAARs %	(t-stat)	
All Sources of Financing	1.08	(1.47)	0.77^a	(3.15)	−3.11^a	(−5.45)	1361
• Cash payment	1.04	(1.20)	0.94^a	(3.87)	−2.21^a	(−3.85)	854
• Mixed (Cash-and-Equity) payment	−0.73	(−1.24)	1.09^a	(2.84)	−4.11^a	(−5.51)	259
• Equity payment	3.09^a	(3.37)	−0.16	(−0.18)	−5.15^a	(−7.12)	248
Diff. Cash Pmt – Mixed Pmt	1.77^a	(2.78)	−0.15	(−1.21)	1.90^a	(4.32)	
Diff. Cash Pmt – Equity Pmt	−2.05^a	(−3.71)	1.10^a	(3.29)	2.94^a	(6.00)	
Cash Financing	0.42	(0.62)	0.79^a	(3.60)	−1.35^a	(−2.95)	590
• Cash payment	0.42	(0.62)	0.79^a	(3.60)	−1.35^a	(−2.95)	590
Debt Financing	1.92^b	(1.99)	1.32^a	(4.12)	−0.28	(−1.38)	173
• Cash payment	1.92^b	(1.99)	1.32^a	(4.12)	−0.28	(−1.38)	173
Debt and Equity Financing	−1.85^a	(−2.54)	1.10^a	(3.02)	−3.14^a	(−4.62)	139
• Cash payment	2.64^a	(2.72)	0.81^a	(2.88)	−4.52^a	(−3.22)	42
• Mixed (Cash-and-Equity) payment	−3.82^a	(−3.34)	1.22^a	(3.40)	−1.09^a	(−4.13)	97
Equity Financing	1.87^a	(3.11)	0.49^a	(2.84)	−5.73^a	(−7.05 ^a)	459
• Cash payment	2.66^a	(3.14)	1.21^a	(2.64)	−6.25^a	(−3.11 ^a)	49
• Mixed (Cash-and-Equity) payment	0.42	(0.34)	1.01^a	(2.76)	−4.91^a	(−5.77 ^a)	162
• Equity payment	3.09^a	(3.37)	−0.16	(−0.18)	−5.15^a	(−3.12 ^a)	248
Diff. Cash Pmt – Mixed Pmt	2.24^a	(4.11)	0.20	(1.36)	−1.34^a	(−4.12 ^a)	
Diff. Cash Pmt – Equity Pmt	−0.43^a	(−2.66)	1.37^a	(4.05)	−1.10^a	(−5.23 ^a)	
Diff. Cash Fin – Debt Fin	−1.50^a	(−3.33)	−0.53^b	(−2.18)	−1.07^a	(−4.03)	
Diff. Cash Fin – Debt & Equity Fin	2.27^b	(2.05)	−0.31	(−1.58)	1.79^a	(4.86)	
Diff. Cash Fin – Equity Fin	−1.45^a	(−3.40)	0.30^c	(1.93)	4.38^a	(8.01)	

This table reports the average values of the cumulative abnormal returns (CAARs) for bidding firms for 3 event windows. The CAARs are classified by the sources of takeover financing and the means of payment. The abnormal returns are computed as the difference between the realized returns and the market-model-benchmark returns. The daily market-model-benchmark returns are based on the MSCI-Europe index and the market model parameters are estimated over a period of 240 days starting 300 days prior to the acquisition announcement. A non-parametric test (Corrado, 1989) is used to assess the significance of the CAARs. Indicators a/b/c correspond to the statistical significance at the 1%/5%/10% level, respectively. Statistically different from zero returns are denoted in bold.

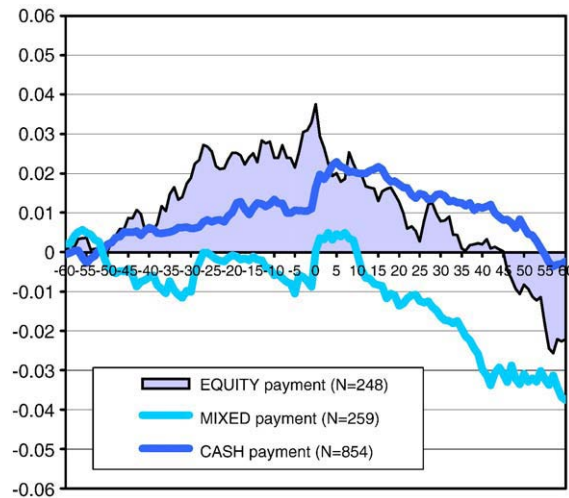


Fig. 2. Note: Figure 2 shows the daily evolution of the cumulative average abnormal returns (CAARs) for different subsamples of bidding firms starting 60 trading days before the bid announcement up to 60 days after the bid. The subsamples are classified by the means of payment. The number of observations in each subsample is reported in brackets. The day of the bid announcement is denoted as day 0. Abnormal returns are computed as the difference between the realized and market model benchmark returns. For each firm we calculate daily benchmark returns using MSCI-Europe index returns and the market model parameters are estimated over 240 days starting 300 days prior to the acquisition announcement.

It is important to highlight that the above results reveal that sources of transaction financing (in addition to the means of payment) are an important determinant of the market reaction to the takeover announcement. Investors are able to differentiate between the information about the payment method and the sources of takeover financing, and they do indeed take into account both these deal characteristics. To ensure that the observed effects are not driven by other characteristics of the bidding and target firms and the takeover deal itself, we also perform a multivariate analysis. In separate regressions, we investigate the factors affecting the cumulative abnormal returns (CARs) realized prior to the bid over the period $[-60, -2]$, at the bid announcement (over the 3 days centred around the event day), and subsequent to the bid over the period $[+2, +60]$. In order to capture the valuation effect of the bidder's financing decision when the firm employs the same mode of payment, we also run regressions for the subsamples of all-cash and mixed offers. The determinants of the anticipated wealth creation for bidding firms are reported in Table 6.

The regression results confirm that the sources of transaction financing are important determinants of the bidder's share price reaction to the takeover announcement in addition to the means of payment. Over a 3-month period prior to the acquisition

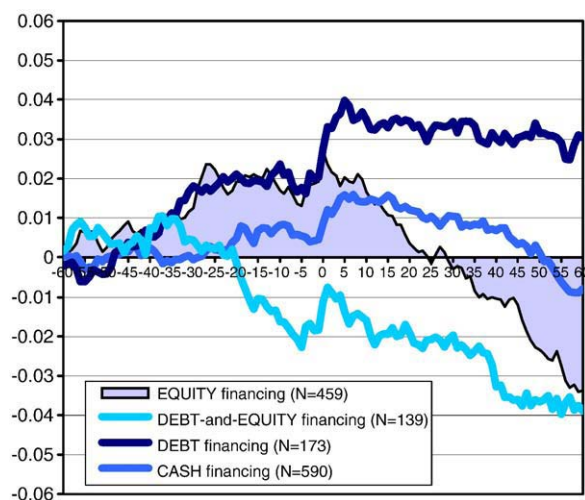


Fig. 3. Figure 3 shows the daily evolution of the cumulative average abnormal returns (CAARs) for different subsamples of bidding firms starting 60 trading days before the bid announcement up to 60 days after the bid. The subsamples are classified by the sources of financing. The number of observations in each subsample is reported in brackets. The day of the bid announcement is denoted as day 0. Abnormal returns are computed as the difference between the realized and market model benchmark returns. For each firm we calculate daily benchmark returns using MSCI-Europe index returns and the market model parameters are estimated over 240 days starting 300 days prior to the acquisition announcement.

Table 6

The valuation effect of the financing choice: multivariate analysis.

	WHOLE SAMPLE						CASH PAYMENT						MIXED PAYMENT					
	CAR [−60, −2]		CAR [−1, +1]		CAR [+2, +60]		CAR [−60, −2]		CAR [−1, +1]		CAR [+2, +60]		CAR [−60, −2]		CAR [−1, +1]		CAR [+2, +60]	
	Effect	p-val	Effect	p-val	Effect	p-val	Effect	p-val	Effect	p-val	Effect	p-val	Effect	p-val	Effect	p-val	Effect	p-val
	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
EQUITY PMT / EQTY FIN	1.56^b	.042	− 0.69^c	.257	−3.34	.137												
CASH PMT / EQTY FIN	2.03	.603	0.88	.305	− 6.04^c	.067	3.55	.358	0.42	.611	− 7.85^b	.022						
CASH PMT / DEBT FIN	1.06	.731	1.10	.163	3.02	.257	2.22	.481	0.85	.202	1.73	.135						
MIX PMT / DEBT FIN	− 6.72^b	.015 ^b	0.89	.275	1.82	.552							− 7.75^a	.004	0.96	.362	5.46	.160
CROSSBORDER BID	−2.97	.272	−1.12	.136	−2.61	.166	−1.02	.669	−0.41	.415	−3.40	.107	2.80	.670	−2.00	.150	−1.10	.862
HOSTILE BID	8.74^a	.004	− 1.64^b	.034	−3.98	.322	3.33^b	.031	−0.83	.458	−3.44	.465	15.20^b	.037	− 4.31^c	.095 ^c	−6.35	.430
TENDER OFFER	2.22	.608	− 2.67^c	.005	−2.65	.337	−3.63	.346	−0.59	.467	0.41	.906	12.50	.212	− 3.89^c	.067	−0.64	.941
LISTED TARGET	−1.27	.759	0.36	.650	1.03	.773	1.32	.705	0.38	.607	3.07	.354	−3.22	.747	−0.05	.980	3.76	.547
INTRA-IND BID	−1.39	.181	−0.25	.520	0.57	.794	−2.44	.304	−0.42	.397	1.94	.351	−0.21	.968	−0.28	.767	−1.28	.704
1997–1999	1.61^c	.057 ^c	1.61^c	.051	− 4.89^a	.010	4.71^b	.011	0.98^c	.082	−3.48	.140	−1.31	.794	1.04	.325	− 4.33^b	.014
2000–2001	4.49^c	.054	−0.09	.919	− 13.97^a	.000	3.37	.268	0.87	.177	− 9.57^a	.000	5.83	.125	−0.31	.802	− 15.78^a	.000
CFLOW/TA	− 3.92^a	.002	−0.04	.913	2.35^b	.035	− 8.42^a	.000	0.41	.223	2.20^c	.087	0.44	.873	0.22	.811	2.37	.347
Q-RATIO	0.38	.751	0.06	.847	− 4.94^a	.000	1.68	.265	−0.13	.725	− 6.32^a	.000	2.48	.301	−0.17	.876	− 5.79^a	.010
LEVERAGE	− 2.18^c	.081 ^c	0.37	.273	1.27	.242	−0.92	.527	−0.06	.846	−0.68	.549	− 5.08^c	.059	1.68^c	.063	2.94	.235
TOEHOLD	−0.51	.677	0.24	.474	1.67	.144	−0.07	.961	0.50^c	.095	2.27	.039	−1.19	.533	−0.34	.586	1.97	.216
RUNUP			1.12	.000	2.55^a	.000			1.35^a	.000	1.34^a	.000			1.78	.093	3.70^a	.000
N obs.	1361		1361		1361		854		854		854		259		259		259	
Adjusted-R ²	3.85		6.69		27.09		7.95		5.22		23.75		11.43		10.47		30.97	
F-value	2.59 ^a	.000	7.33 ^a	.000	33.84 ^a	.000	3.28 ^a	.000	4.14 ^a	.000	18.78 ^a	.000	2.85 ^a	.001	5.02 ^a	.000	16.43 ^a	.000

This table reports the results of the OLS regressions of the bidder CARs for three different event windows and for the subsamples of all-cash and mixed offers. For each explanatory variable, we list the regression coefficient normalized by its standard deviation (except for binary variables). As such, each number in the table indicates the incremental change in the analysed CARs (%) associated with a particular takeover characteristic (binary variables) or with a one-standard deviation change in the variable (level variables). The statistically significant effects are denoted in bold. Statistical significance is indicated by the heteroskedasticity-consistent *p*-value. a/b/c stand for statistical significance at the 1%/5%/10% level, respectively. The variables are defined as follows: EQUITY PMT / EQTY FIN = dummy for takeovers entirely paid and financed with equity; CASH PMT / EQTY FIN = dummy for takeovers entirely paid with cash which is financed with equity; CASH PMT / DEBT FIN = dummy for takeovers entirely paid with cash which is financed with debt; MIX PMT / DEBT FIN = dummy for takeovers paid with a combination of cash with the cash component financed with debt; CROSSBORDER BID = indicator equals one if the bid is on a foreign company; HOSTILE BID = indicator equals one if the bid is initially opposed by the target firm's management; TENDER OFFER = indicator equals one if the bid is in a form of tender offer; LISTED TARGET = indicator equals one if the target firm is listed on a stock exchange; and INTRA-IND BID = indicator equals one if the bid is on company of the same industry; 1997–1999 and 2000–2001 = the dummy variables for the respective time periods; CFLOW/TA = cash flow / total assets; Q-RATIO = Tobin's Q; LEVERAGE = leverage ratio; TOEHOLD = percentage of the target firm's shares that the bidder held prior to the bid announcement; RUNUP = the price run-up prior to the announcement. More detailed definition of variables is given in Appendix A.

announcement, bidders using debt to finance the cash component of a mixed offer significantly underperform their peers using alternative financing and payment modes (see columns 1 and 7 of Table 6). The post-announcement effect of debt-financed acquisitions is positive (albeit statistically insignificant; see columns 3 and 6 of Table 6). In contrast, firms issuing equity to raise cash to pay for a takeover experience a significant share price decline over a 3-month period subsequent to the bid. The remainder of the results from Table 6 is in line with the conclusions from the univariate analysis reported above.

6. Conclusions

We investigate the bidder's choice of the sources of financing in European corporate takeovers. To our best knowledge, this is the first empirical study that simultaneously studies both the payment and financing decisions in corporate takeovers. The previous M&A literature has uniquely focused on the means of payment; these studies have typically ignored the sources of transaction financing in all-cash offers and have assumed that these offers are entirely financed with internally generated funds. This paper shows that external sources of financing (debt and equity) are frequently employed even in cash-paid acquisitions and that the decisions on the financing and the means of payment are entirely different and driven by distinct factors.

The results of our multinomial and nested logit analyses reveal that, while controlling for the payment method, bidders have systematic preferences for particular sources of financing which depend on their firm's characteristics (such as the cash flows, debt capacity, corporate governance regulation, and growth opportunities) and on the characteristics of the takeover (relative size of the target, bid hostility, public or private status of the target firm, etc.). Our findings are consistent with the view that the financing decision is influenced by the bidder's concerns about the *cost of capital*. In particular, in line with the pecking order hypothesis, cash-rich bidders opt for the least expensive source of financing – internally generated funds. Bidders with insufficient internal funds raise external capital to finance M&As: they employ borrowing when their debt capacity is high (leverage is low and the collateral value of their assets is high). They opt for an equity issue when investor sentiment is positive about the firm's fundamental value (price run-up is high). However, the need of flexibility in managing corporate funds prevents firms with strong growth opportunities from financing the takeover with debt which may create a debt overhang problem and makes them use equity capital instead (even when they still have a high debt capacity). Bidders operating in a better corporate governance environment benefit from lower costs of external capital: debt financing is more likely when creditor rights are well protected by law and courts, and the use of equity financing increases when shareholder rights protection is high.

The financing decision is unrelated to *agency problems* that may be induced by conflicts of interests between the management and shareholders: firms with dispersed ownership structure do not selectively prefer cash and equity financing over borrowing, though this is the least preferred source of financing by entrenched managers. Our data do not support the conjectured relationship between the financing choice and the agency problems induced by a conflict of interests between shareholders and creditors. Risky firms have no systematic preferences for equity financing even when debt financing may be less attractive.

The takeover financing decision is influenced by the bidder's *strategic preferences for specific types of means of payment*. As equity financing of M&As enables the bidder to make a direct equity offer to the target's shareholders, the bidder may benefit from sharing the takeover's risk with the target's incumbent shareholders. The risk-sharing benefits of an equity offer increase with the relative size of the transaction. However, equity financing is less likely when the bidding firm is vulnerable to the threat of a control change. Large shareholders of bidding firms prefer financing with internal funds or debt (hence, a cash payment) if an all-equity bid could threaten their control position. This would occur if the bidder's large shareholders hold an intermediate level of control and the target has a concentrated control structure.

We also document that the financing decision has a significant impact on the value of the bidding firm. Investors take into account the *information signalled* by the choices of both the payment method and the sources of takeover financing when estimating the possible synergistic value of the takeover at the announcement. A significantly negative price revision following the announcement of a takeover is common for equity-paid takeovers and is also observed in any other takeover deals that involve equity financing (including cash-paid and mixed-paid M&As). The evidence confirms that investors consider equity issues as a signal that the firm's shares are overvalued. We also find that acquisitions financed with internally generated funds underperform debt-financed deals, which suggests that investors are wary that cash-financed deals may be driven by managerial empire building motives.

Answering the question in the title of this paper 'What determines the financing decision in corporate takeovers: cost of capital, agency costs or the means of payment?', we have found that the financing is in the first instance determined by the cost of capital both at the firm and the country/regulatory level. Whereas agency costs do not seem to influence the financing decision, the means of payment indirectly does. Bidding firms use the means of payment as a tool to reduce the risks associated with the takeover deal, such as the risk of the target firm's misvaluation, the threat of a control change, and the risk of the bid's failure. We have highlighted that the two decisions (the means of payment and the sources of financing) in a corporate takeover bid are driven by distinct factors. In addition to the means of payment, the way a takeover deal is financed transmits important information to the market about quality of the bidding firm and profitability of the deal.

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Appendix A. Variable definitions

Variable	Definition
(B) MVAL (m US\$)	Market capitalization of the bidding firm 60 days prior to the initial bid announcement. Source: <i>DataStream</i>
(T) BLOCKHDR > 20	Indicator equals one if target firm is controlled by a blockholder owning more than 20% voting stake prior to the takeover. Source: see Appendix B .
1993–1996	Indicator equals one if the bid was initiated in the period between January 1, 1993 and December 31, 1996; equals zero otherwise. Source: <i>SDC</i>
1997–1999	Indicator equals one if the bid was initiated in the period between January 1, 1997 and December 31, 1999; equals zero otherwise. Source: <i>SDC</i>
20 < CONTROL < 60	Indicator equals one if bidding firm is controlled by a blockholder owning more than 20 but less than 60% of the voting rights (20% <= CONTROL < 60%). Source: see Appendix B .
2000–2001	Indicator equals one if the bid was initiated in the period between January 1, 2000 and December 31, 2001; equals zero otherwise. Source: <i>SDC</i>
AGE	Number of years since the firm was incorporated. Source: <i>Amadeus/Fame/Reach and DataStream</i>
BETA	Equity beta of the bidding firm, estimated using the market model over the period of 300 to 60 days before the M&A announcement. The market index is the MSCI Europe. Source: own computations
BLOCKHDR > 20	Indicator equals one if bidding firm is controlled by a blockholder owning a voting stake of 20% or more. Source: see Appendix B .
CAPX 3YGR (%)	Bidder's average annually compounded growth rate in capital expenditures (scaled by the total assets) over the three-year period preceding the year of the M&A announcement. Source: <i>Amadeus/Fame/Reach and DataStream</i>
CASH FIN	Indicator equals one if internal sources are employed to finance the cash component of the payment in corporate takeover, and equals zero otherwise. Source: <i>LexisNexis, Factiva, and Financial Times</i>
CASH PMT	Indicator equals one if the acquisition is fully paid with cash, and equals zero otherwise. Source: <i>SDC, LexisNexis, Factiva, and Financial Times</i>
CASH PMT – DEBT FIN	Indicator equals one if borrowing is used to finance the all-cash payment, and equals zero otherwise. Source: <i>SDC, LexisNexis, Factiva, and Financial Times</i>
CASH PMT – EQTY FIN	Indicator equals one if an equity issue is used to finance the all-cash payment, and equals zero otherwise. Source: <i>SDC, LexisNexis, Factiva, and Financial Times</i>
CROSSBORDER BID	Indicator equals one if the bidder and target are from different countries, and equals zero otherwise. Source: <i>SDC, LexisNexis, Factiva, and Financial Times</i>
CFLOW/TA	Ratio of total cash flow (including cash flow from operating, financial, and investment activities) to total assets, at the year-end prior to the deal announcement. Source: <i>Amadeus/Fame/Reach and DataStream</i>
CFLOW/TRANSVAL	Ratio of the bidder's total cash flow (including cash flow from operating, financial, and investment activities) over the price paid for the acquisition. Cash flow is at the year-end prior to the deal announcement. Source: <i>SDC and Amadeus/Fame/Reach and DataStream</i>
CHLDG/TRANSVAL	Ratio of the bidder's cash holdings (cash and cash equivalents in place) over the price paid for the acquisition. Cash and cash equivalents are at the year end prior to the deal announcement. Source: <i>SDC and Amadeus/Fame/Reach and DataStream</i>
COLLATERAL	Variable that takes the value of the tangible assets of the combined firm: sum of the bidder's and target's tangible assets scaled by the sum of their total assets. All measures are at the year prior to the deal announcement. Source: computed based on <i>Amadeus/Fame/Reach and DataStream</i>
CONTROL THREAT (%)	Target's largest controlling share block multiplied by RELVAL. If the target is unlisted, the controlling share block prior to the takeover deal is assumed to be 100%. Source: <i>SDC, Amadeus/Fame/Reach and sources reported in Appendix B</i> .
CONTROL (%)	Ultimate voting stake owned by the bidder's largest shareholder. Source: see Appendix B .
CONTROL < 20	Indicator equals one if the bidding firm is widely-held: there is no shareholder owning 20% or more of the voting rights. Source: see Appendix B .
CONTROL > 60	Indicator equals one if bidding firm is controlled by a large blockholder owning 60% or more of the voting rights. Source: see Appendix B .
CORRUPT	The corruption index, which indicates the extent to which one can exercise public power for private gain. It quantifies indicators ranging from the frequency of "additional payments to get things done" to the effects of corruption on the business environment. The index ranges between 0 and 5, with higher values corresponding to better quality of law enforcement. Source: <i>The World Bank</i> (http://www.worldbank.org/wbi/governance/)
CR PRT × RULAW	Variable that takes the value of the Creditor rights protection index (CREDITOR PRT) multiplied by the Rule of Law index (RULE OF LAW). Source: own computations
CREDITOR PRT	The creditor rights protection index, which hinges on the regulatory provisions that allow creditors to force repayment more easily, to take possession of the collateral, or even to gain control over the firm in case of financial distress. The index ranges between 0 and 5, with higher values corresponding to better regulatory protection of creditor rights. Source: Martynova and Renneboog (2009)
DEBT FIN	Indicator equals one if a debt issue is used to raise cash, and equals zero otherwise. Source: <i>LexisNexis, Factiva, and Financial Times</i>
DEBT/EQUITY FIN	Indicator equals one if both debt and equity issues are used to raise cash, and equals zero otherwise. Source: <i>LexisNexis, Factiva, and Financial Times</i>
EQUITY FIN	Indicator equals one if an equity issue is used to raise cash, and equals zero otherwise. Source: <i>LexisNexis, Factiva, and Financial Times</i>
EQUITY PMT	Indicator equals one if the acquisition is fully paid with equity, and equals zero otherwise. Source: <i>SDC, LexisNexis, Factiva, and Financial Times</i>

Appendix A (continued)

Variable	Definition
FIN LEVERAGE	Bidding firm's long-term debt prior to the M&A announcement plus the deal value, all divided by the sum of the bidding firm's total assets prior to the M&A announcement and the deal value. Source: computed based on <i>DataStream</i> , <i>Amadeus/Fame/Reach</i> , <i>SDC</i> , <i>LexisNexis</i> , <i>Factiva</i> , and <i>Financial Times</i>
HOSTILE BID	Indicator equals one if initial takeover offer meets a negative reaction by the target's board or management or if a competing bid is made. Source: <i>SDC</i> , <i>LexisNexis</i> , <i>Factiva</i> , and <i>Financial Times</i>
INTRA-IND BID	Indicator equals one if the bidder and target operate in the same industry (primary 2-digit SIC code coincides), and equals zero otherwise. Source: <i>SDC</i> and <i>Amadeus/Fame/Reach</i>
LEVERAGE	Ratio of the bidder's total debt (short-term and long-term) to total assets at the year-end prior to the deal announcement. Source: <i>Amadeus/Fame/Reach</i> and <i>DataStream</i>
LISTED TARGET	Indicator equals one if the target firm is listed on any stock exchange at the moment of bid announcement, and is zero otherwise. Source: <i>SDC</i> , <i>LexisNexis</i> , <i>Factiva</i> , and <i>Financial Times</i>
MIX PMT – DEBT FIN	Indicator equals one if borrowing is used to finance the cash component of the mixed payment, and equals zero otherwise. Source: <i>SDC</i> , <i>LexisNexis</i> , <i>Factiva</i> , and <i>Financial Times</i>
MIXED PMT	Indicator equals one if the acquisition is paid with a combination of cash and equity, and equals zero otherwise. Source: <i>SDC</i> , <i>LexisNexis</i> , <i>Factiva</i> , and <i>Financial Times</i>
Q-RATIO	Bidder's ratio of the market value of equity (ordinary and preferred) plus book value of total debt over the sum of book value of equity and book value of total debt. The market value of equity is taken 60 days prior to deal announcement; book values of equity and debt are at the year-end prior to deal announcement. Source: <i>Amadeus/Fame/Reach</i> and <i>DataStream</i>
RELVAL (%)	The ratio of the TRANSVAL over the sum of the TRANSVAL plus the bidder's market capitalization. Source: <i>SDC</i> , <i>LexisNexis</i> , <i>Factiva</i> , <i>Financial Times</i> , <i>Amadeus/Fame/Reach</i> and <i>DataStream</i>
RULE OF LAW	The Rule of Law index, which measures the extent to which agents have confidence in and abide by the rules of society, and these include the effectiveness and predictability of the judiciary and the enforceability of contracts. It quantifies indicators which measure the extent to which agents have confidence in and abide by the rules of society. The index ranges between 0 and 5, with higher values corresponding to the better quality of law enforcement. Source: <i>The World Bank</i> (http://www.worldbank.org/wbi/governance/).
RUNUP (%)	Cumulative abnormal returns (CARs) of the bidder over the window [–60, –20] preceding the takeover announcement day. Daily abnormal returns are computed as the difference between realized and market model benchmark returns. The market model uses the MSCI-Europe index and its parameters are estimated over 240 days starting 300 days prior to the acquisition announcement. Source: own computations
SALES 3YGR (%)	Bidder's average annually compounded growth rate in sales revenues (scaled by total assets) over the three-year period preceding the year of takeover announcement. Source: <i>DataStream</i> and <i>Amadeus/Fame/Reach</i>
SH PRT×RULAW	Variable that takes the value of the Shareholder rights protection index (SHAREHDR PRT) multiplied by the Rule of Law index (RULE OF LAW). Source: own computations
SHAREHDR PRT	The shareholder rights protection index captures the shareholders' ability to mitigate managerial opportunistic behaviour. The index ranges between 0 and 25, with higher values corresponding to better governance outcomes. Source: <i>Martynova and Renneboog (2009)</i>
TA 3YGR (%)	Bidder's average annually compounded growth rate in total assets over the three-year period preceding the year of the deal announcement. Source: <i>Amadeus/Fame/Reach</i> and <i>DataStream</i>
TENDER OFFER	Indicator variable equals one if the bidder makes a public offer to purchase shares of the target firm and the takeover is not classified as hostile (see HOSTILE BID), and is zero otherwise. Source: <i>SDC</i> , <i>LexisNexis</i> , <i>Factiva</i> , and <i>Financial Times</i>
TO THREAT	Measure of the bidder's takeover vulnerability: the likelihood of being acquired, estimated with a probit model for the sample of European firms for the period 1993–2001. The sample is constructed as unbalanced panel with 9-years time series. The dependent variable equals one if a firm was acquired during the year and is zero otherwise. The estimates of the probit model are available from the authors upon request. Source: own computations
TOEHOLD	Percentage of the target firm's shares that the bidder held prior to the bid announcement. Source: <i>SDC</i> , <i>LexisNexis</i> , <i>Factiva</i> , and <i>Financial Times</i>
TRANSP×RULAW	Variable that takes the value of the Transparency index (TRANSPARENCY) multiplied by the Rule of Law index (RULE OF LAW). Source: own computations
TRANSPARENCY	The transparency index reflects the degree to which the market is informed about the corporate policies, contracts with management, and the frequency with which this information is released. The index ranges between 0 and 10, with higher values corresponding to better transparency. Source: <i>Martynova and Renneboog (2009)</i>
TRANSVAL (m US\$)	Price paid for the acquisition in US\$ equivalent. Source: <i>SDC</i> , <i>LexisNexis</i> , <i>Factiva</i> , and <i>Financial Times</i>

Appendix B. Sources of ownership data

We collect ownership data for bidding and target firms from annual reports, from institutions such as the shareholder register of national stock exchanges, as well as from the ownership and control researchers listed below.

Country	Data source
Austria	Prof. Dr. Klaus Gugler (<i>University of Vienna</i>); <i>Faccio and Lang (2002)</i> .
Belgium	Prof. Dr. Christoph van der Elst (<i>Tilburg University</i>); own dataset.
Cyprus	Stockwatch Cyprus (http://www.stockwatch.com.cy).
Czech Rep.	SCP– The Prague Securities Centre (http://www.scp.cz).
Denmark	Prof. Dr. Steen Thomsen and Mr. Michael Emil Olinger (<i>Copenhagen Business School</i>).
Estonia	Tallinn Stock Exchange (http://www.ee.omxgroup.com).
Finland	Prof. Dr. Benjamin Maury (<i>HANKEN Swedish School of Economics and Business Administration</i>).
France	Prof. Dr. Alain Alcouffe (<i>Toulouse University</i>); <i>Faccio and Lang (2002)</i> .
Germany	Prof. Dr. Ekkehart Boehmer (<i>Texas A&M University</i>); <i>Faccio and Lang (2002)</i> . Own dataset.

(continued on next page)

Appendix B (continued)

Country	Data source
Ireland	Thomson Financial Research: annual reports of individual firms; Faccio and Lang (2002).
Italy	Prof. Dr. Marcello Bianchi (CONSOB).
Latvia	Riga Stock Exchange (http://www.rfb.lv); Dr. Anete Pajuste (Riga Business School).
Lithuania	Vilnius Stock Exchange (http://www.nse.lt).
Netherlands	Financieel Dagblad, and annual reports. Own dataset.
Norway	Prof. Dr. Bernt Arne Odegaard (Norwegian School of Management BI).
Poland	Dr. Grzegorz Trojanowski (University of Exeter).
Portugal	Prof. Dr. Carlos Ferreira Alves (Porto University); Mr. Pedro Verga Matos (Universidade Técnica de Lisboa); CMVM – Comissão do Mercado de Valores Mobiliários (www.cmvm.pt).
Romania	Bucharest Stock Exchange (http://www.bvb.ro).
Slovenia	Dr. Aleksandra Gregoric (Ljubljana University).
Spain	Prof. Dr. Rafel Crespi (Universitat de les Illes Balears); CNMV- Comisión Nacional del Mercado de Valores (http://www.cnmv.es).
Sweden	Prof. Dr. Martin Holmen (Uppsala University).
Switzerland	Dr. Markus Schmid (University of Basel); Mr. Diego Dimitri Liechti (Universität Bern); data source Swiss Stock Guide (Schweizer Aktienführer).
UK	Dr. Grzegorz Trojanowski (University of Exeter); Faccio and Lang (2002); Own dataset. Thomson Financial Research: annual reports of individual firms.

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