

Sources of Transaction Financing and Means of Payment in Corporate Takeovers

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Abstract:

We analyse the choices regarding the sources of financing and the payment methods in European domestic and cross-border corporate takeovers launched during 1993-2001. To our knowledge, this is the first empirical study that takes into account the sources of financing in cash and mixed offers. We show that all-cash offers financed with external sources of financing (debt or equity) are frequently employed. Using a unique dataset, we show that financial constraints, asymmetric information, agency problems, and corporate control concerns have a significant impact on the bidder's financing/payment decisions. We also document that differences in the regulatory corporate governance environment, captured by detailed governance indices, are also important determinants of the financing and payment choices. In addition, the paper investigates what motivates companies to conceal the terms (including the means of payment) of their M&A transactions. We find that the terms of the acquisition are not disclosed when the acquisition expropriates the rights of the minority shareholders.

JEL codes: G34

Keywords: mergers and acquisitions, means of payment, financing takeovers, corporate governance, shareholder protection

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1. INTRODUCTION

The choice of the means of payment in mergers and acquisitions (M&As) constitutes a hotly debated issue in the recent empirical literature. An important finding of the last two decades is that despite the superior price reactions to and long-term outperformance of cash offers relative to all-equity offers¹, all-equity acquisitions are not a rare phenomenon. Moreover, during the last two decades, one observes a trend towards a switch from cash to equity in the financial composition of takeover bids. Andrade et al. (2001) show that all-equity acquisitions represented 32.9% of all US M&As in the 1980s versus 57.8% in the 1990s. Similarly, Martynova and Renneboog (2006) confirm that equity has become a popular source of financing in European M&As: the proportion of all-cash acquisitions fell by half in the 1990s compared to the 1980s. These developments have led to increasing concern in the literature that the choice of payment method in M&A process is not fully understood.

The empirical literature has given notable attention in the recent years to understanding the choice of the means of payment in corporate takeovers. The two most recent studies Martin (1996) and Faccio and Masulis (2005) document that the bidder's choice between cash and equity payment method is driven by financial constraints, corporate governance and risk sharing as well as by market timing considerations. However, none of these studies provide an answer to the question of what motivates bidding firms to make equity offers to the target shareholders rather than cash offers financed by raising equity in the secondary market. The existing empirical studies of the means of payment in M&As typically ignore the sources of transaction financing in all-cash offers and assume that these offers are entirely financed with cash². However, this simplification may lead to misleading conclusions.

This paper contributes to the existing literature on the means of payment in corporate takeovers by jointly investigating the factors driving the bidder's choice related to the sources of transaction financing and payment methods. To our best knowledge, this is the first empirical study in the field that takes into account the sources of funds in cash and mixed offers. We believe that the lack of reliable data on the sources of takeover financing is one of the major reasons why the financing decision of the bidding has never been investigated before. Our analysis is based on a unique hand-collected dataset for European M&As launched during the fifth takeover wave (between 1993 and 2001). The analysis reveals that the external financing of a payment involving cash is of significant importance to bidding firms. In the more than 850 all-cash offers, one-third is at least partially financed with external funds, 70% of which are financed with debt. Among the 260 firms opting to make an offer consisting of a combination of

¹ Travlos (1987), Franks, Harris and Titman (1991), Andrade, Mitchell and Stafford (2001), and Martynova and Renneboog (2006), among many others provide evidence that all-equity paid acquisitions generate significantly lower returns to the shareholders of both the bidding and target firms than cash acquisitions.

² Faccio and Masulis (2005) recognize that a cash payment can also be financed with debt.

equity and cash, 37% borrow to finance the cash component of the payment. The number of all-cash offers financed with equity is more than five times lower than the number of M&As paid with equity. This proportion has also been increasing over time, with the number of all-equity bids almost 10 times exceeding the number of cash-paid but equity-financed bids from the year 2000 to 2001.

The application of multinomial logit and nested logit estimation models allow us to investigate jointly how financing and payment decisions are used by bidders to address financial constraints, asymmetric information, agency problems, and corporate control concerns. Our findings reveal that financial constraints, in particular, play a large role in the takeover financing decision of bidding firms, but that the choice of funding sources is not entirely explained by the pecking order theory. Corporate control retention by the bidder's large shareholders, risk sharing as well as information asymmetries between bidding and target firms explain part of the payment decision. There are large differences in the sensitivity of both financing and payment decisions to market timing variables: equity financing and equity payments are preceded by a significant share price run-up.

The focus on M&As between Continental European and UK companies gives some additional value for this paper, as it allows us to explore the impact of a wide range of institutional settings and regulatory rules on the pattern of the financing/payment decisions. We capture the differences in the regulatory corporate governance environment across European countries by a set of newly created governance indices. With the help of 150 corporate lawyers in 32 European countries, we have created a corporate governance database that comprises the main changes in corporate governance regulation in all European countries (including countries from Central and Eastern Europe) over the last 15 years. For each country, we quantify the regulations and measure their effectiveness in mitigating the conflicts of interests between the various corporate constituencies: the management, the majority and minority shareholders, and the creditors. We also quantify the regulatory provisions aiming at improving the transparency of corporate information. It is worth noting that, in contrast to previous studies, all legal indices employed in this paper are time-varying and incorporate all changes in the legal environment during the 1990s.

The evidence indicates that the financing and payment choices are very sensitive to the differences in the legal environment across countries. In particular, the choice of equity payment in takeover bids is more likely in countries with lower protection of minority shareholder rights. The only exception to this rule is the preference of all-equity payment over all-cash payment financed with equity. In this case, an all-equity payment is more likely to be offered in countries with better minority shareholder protection. Regarding the choice of financing sources, the bidder is more likely to use external sources of financing (equity and debt), if it is from a country

with a better protection of shareholder and creditor rights. Bidders rely on internally generated funds as a means of transaction financing in an environment with the weakest creditor and shareholder protection and lowest corporate transparency standards. This evidence is in line with LaPorta et al. (1998) who argue that a better protection of financiers from expropriation by entrepreneurs facilitates the development of well-functioning capital markets and ensures lower costs of financing.

Another important contribution of our paper to the existing literature is the analysis of a subsample of European M&As with undisclosed means of payment. We find that our initial sample of corporate takeovers excludes a substantial number of acquisitions that lack information about the terms of the transaction (e.g. the means of payment). To understand the ‘non-disclosure’ phenomenon better, we investigate what motivates companies to conceal the terms of their M&A transactions. The results of our analysis suggest that the terms of the acquisitions are not disclosed when the acquisitions are aimed at expropriating the minority shareholders. Recent takeover studies find no support for the hypothesis that controlling shareholders use acquisitions to expropriate resources to their benefit (Faccio and Stolin, 2004; Holmen and Knopf, 2004). We argue that the lack of empirical evidence for the expropriation motive of takeovers is due to the fact that most studies focus on M&As with known terms of transactions while disregarding ‘undisclosed’ M&As. We believe that the analysis of the ‘undisclosed’ takeovers subsample constitutes a prominent area for future research.

The remainder of the paper is organized as follows. In Section 2, we provide an overview of the hypotheses on the choice of a means of financing and a means of payment. Section 3 discusses the methodology. Section 4 provides an overview of the data and reports the descriptive statistics of the sample. We present a univariate comparison of the explanatory variables in Section 5 and a multivariate analysis in Section 6. The last section provides a summary of the results and concludes.

2. HYPOTHESES

In this section, we examine nine testable hypotheses on the bidder’s choice of the means of financing of corporate takeovers. As the bidder’s decision on the payment method in corporate takeovers may be driven by considerations other than the financing choice, we investigate an additional five hypotheses related to the bidder’s strategic considerations over the choice of the means of payment.

A. The determinants of the sources of financing

The Modigliani and Miller (1958) irrelevance proposition implies that in the world of perfect markets companies are indifferent between equity and debt financing. However, it is

well established that the irrelevance proposition no longer holds in a world with market imperfections or institutional rigidities, such as information asymmetries, agency costs, transaction costs, and taxes. A vast theoretical and empirical literature documents that market imperfections induce systematic corporate preferences with regard to the sources of funding.

A1. Pecking Order Hypothesis:

Myers and Majluf (1984) show that firms prefer to finance investments from internal funds or by debt rather than by issuing new equity if there are information asymmetries between new investors and the management who acts in the interest of incumbent shareholders. In their model, the management has an incentive to issue equity when the shares of the firm are temporarily overvalued, as this would increase the wealth of the incumbent shareholders. Realizing this, outside investors consider an equity issue as a negative signal about the true value of the firm such that their share transactions adjust the share prices correspondingly. This adverse effect of equity issues increases their costs and forces firms to issue equity only when debt financing is unavailable or extremely costly. Therefore, we hypothesize that *an equity issue is more likely when firms have insufficient cash funds and limited debt capacity to finance their investment projects. A debt issue has priority over an equity issue and is likely when firms are cash-constrained but still have sufficient debt capacity.*

A2. Market-Timing Hypothesis:

Whereas information asymmetries are the key source of temporal equity overvaluation in the Myers and Majluf (1984) model, the behavioral finance literature suggests that financial market buoyancy is another important driver of share price overvaluation (Baker, Ruback, and Wurgler, 2004). Not only do buoyant capital markets overvalue shares in the short-run, but they may also induce investors to under-react to negative signals about the firm fundamental value. Consequently, the adverse effect of equity issues may be less severe in the periods of financial market boom. As selling debt becomes no longer advantageous compared to selling equity, firms are more likely to raise money for their investments by issuing shares (Stein, 1995). We hypothesize that *equity financing follows after a strong performance of the firm's share price in the periods of a financial markets boom.*

A3. Agency Cost of Equity Hypothesis:

Jensen and Meckling (1976) advocate that conflicts of interests between the management and shareholders influence the choice of transaction financing. For a manager who pursues a personal agenda at the expense of value maximization, a debt issue is regarded as the least preferred source of financing as it restricts the availability of corporate funds at the manager's disposal. In contrast, an equity issue increases the funds under managerial discretion and may

hence be strictly preferred by the manager. The theoretical literature argues that this agency conflict between the management and shareholders is most pronounced in widely-held corporations where shareholder activism and efficient monitoring of the management is low (Berle and Means, 1932). Therefore, we expect *equity financing to be more common in firms with a diffuse ownership structure.*

A4. Takeover Threat Hypothesis:

While dispersed (atomistic) shareholders have few incentives to monitor the management directly, they rely on external monitoring by the market for corporate control. Zwiebel (1996) shows that entrenched managers may voluntarily choose debt financing because of the takeover threat from a market for corporate control. In his dynamic model, hostile takeovers target poorly performing firms and replace poorly performing management. The threat of losing their jobs and perquisites provides the managers with an incentive to focus on shareholder objectives, while a debt issue allows them to constrain their discretion over corporate funds credibly. Consequently, we hypothesize that *managers anticipating a takeover threat are more likely to finance their investments with debt.*

A5. Debt Overhang Hypothesis:

Myers (1977) argues that the conflicting interests of shareholders and creditors may induce firms to issue equity rather than debt to raise external funds. In his view, the wealth-maximizing preferences of shareholders dictate the managers to undertake a project only if its expected benefits exceed the payment to the debtholders. This leads to underinvestment as the managers may forgo positive NPV investment projects if the expected benefits from the projects only suffice to repay debt and leave little return to the shareholders. To minimize the scope of underinvestment, firms with good projects may limit leverage and hence avoid further borrowing. Consequently, *firms with high growth potential are expected to finance their investments with equity.*

A6. Agency Cost of Debt Hypothesis:

In addition to the underinvestment problem, conflicts of interests between shareholders and creditors may also lead to excessive risk taking by the management. Black and Scholes (1973) note that the equity of a leveraged firm can be considered as a call option on the firm's assets of which the value increases with the volatility of the firm's future cash flows. Following this argument, Jensen and Meckling (1976) suggest that the management of the leveraged firm may maximize shareholder wealth by increasing the risk of its investment projects, as this would re-distribute wealth from the firm's bondholders to shareholders. However, creditors may

anticipate excessive risk taking and demand better terms in their debt contracts. This adverse effect increases the cost of borrowing, and hence makes debt financing less attractive for the leveraged and risky firms. Therefore, *leveraged firms with high earnings volatility are less likely to choose debt financing.*

A7. Financial Flexibility Hypothesis:

Bolton and Freixas (2000) have yet an alternative view. In the capital market equilibrium they derive, risky firms prefer bank loans to equity financing because banks are good at helping firms through times of financial distress. That is, firms facing high risk of bankruptcy are more likely to build close relationships with banks. This will provide them with access to the cheapest form of flexible financing. However, the authors note that the riskiest firms (which are often start-up firms and risky ventures) are either unable to obtain funding or forced to issue equity, as they are too risky to be granted bank loans. Safer firms prefer to issue equity (and bonds) and hence avoid paying the intermediation cost associated with bank loans. Thus, *firms with high earnings volatility are more likely to choose debt financing.*

A8. Debt Tax Shield Hypothesis:

Tax-deductible interest payments may encourage the issuance of debt (Modigliani and Miller, 1963). Leveraged financing may provide substantial tax benefits to the firm in form of increased tax shields and a reduced cost of capital. It is nonetheless debatable whether the potential tax benefits constitute a true motive for the debt financing choice as the fact that bankruptcy costs increase with leverage may offset the tax benefits of debt financing (Modigliani and Miller, 1963). The benefits of increased debt tax-shields also decrease when the non-debt tax deductions (tax credits and deductions through depreciation) are present (DeAngelo and Masulis, 1980). Nonetheless, we test the debt tax shield hypothesis, which states that *firms with high tax liabilities are more likely to issue debt.*

A9. Providers' of Funds Protection Hypothesis:

A growing literature advocates that regulation plays an important role as a determinant of the corporate choice of financing (LaPorta et al., 1997, 1998; Levin, 1999; Djankov et al., 2004). It is argued that regulation affects the terms at which financiers are willing to provide firms funds. According to LaPorta et al. (1998), the regulatory environment that protects the providers of funds against expropriation by entrepreneurs ensures the availability of external finance at lower costs. Strong creditor protection allowing lenders to force repayment more easily, take possession of collateral, or even gain control of the firm results in lower creditor risks and hence lower borrowing costs. This makes a debt issue more attractive for corporate financing.

Alternatively, strong shareholder protection that enables shareholders to participate in or monitor corporate decision-making results in lower risks to the shareholders and increases the attractiveness of equity financing. Thus, the choice regarding the sources of financing depends on the relative magnitude of the costs associated with debt and equity issues. We hypothesize that *firms are more likely to contract debt in countries where costs of issuing equity are substantially high (poorer shareholders protection) or where the costs of borrowing are relatively low due to better creditor protection.*

B. The determinants of a means of payment

This section deals with the arguments from the literature explaining why bidders prefer specific means of payment in corporate takeovers.

B1. Risk Sharing Hypothesis:

Hansen (1987) shows that information asymmetry between the bidder and the target is an important determinant of the payment medium in corporate acquisitions. In particular, high uncertainty about the true value of the target firm induces the bidder to pay for the acquisition with its own equity instead of cash. Capital participation in the combined firm makes the target shareholders to share the risk of downward post-acquisition revaluations. Hansen (1987) predicts that the probability of an equity offer increases with the size of the target firm and decreases with the size of the acquirer, as the magnitude of a negative adjustment of the value of the firms in the future depends on the target's assets being a sizable addition to the acquirer. We hypothesize that *the probability of an equity exchange increases with the magnitude of the potential negative revaluation.*

B2. Control Loss Hypothesis:

Faccio and Masulis (2005) document that corporate control threats in the form of voting power dilution and outside intervention discourage bidders from paying for acquisitions with their shares. These findings support theories by Stulz (1988) and Jung, Kim, and Stulz (1996) who show that an equity exchange is less likely to be used when an equity issue may dilute voting power of the blockholders or share-owning managers of the acquiring firm. Also, a bidder is reluctant to make an equity offer if the target shareholdings are highly concentrated, as this may create an outside blockholder in the combined (and hence the bidding) firm. The effect of the corporate control threat on the likelihood of an equity payment is 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 or 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. The control loss hypothesis is summarized as follows: *a bidder is unlikely to use an all-equity payment if such an offer significantly affects the firm's control structure.*

B3. Equity Misvaluation Hypothesis:

Asymmetric information between the bidder's management and outside investors regarding the true value of the bidding firm may also have bearing on the choice between cash or equity payments in a takeover bid. If the managers of a bidding firm know that the firm's shares are worth more than their current market price, they will prefer to pay for the acquisition with cash. Conversely, if the bidding management believes that the shares are overvalued, they prefer to offer equity. These predictions are in spirit of the Shleifer and Vishny (2003) and Rhodes-Kropf and Vishwanathan (2003) models, which 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. We hypothesize *that the probability of an all-equity offer increases with the bidder's share price run-up prior to a public takeover announcement.*

B4. Characteristics of Acquisition Hypothesis:

The characteristics of an acquisition offer may be another important determinant of the choice of payment method. First, a cash payment is more likely to be offered in cross-border takeovers, as selling equity to foreign investors may bring about some hurdles. The seller may be reluctant to accept equity of a foreign acquirer because the latter's shares are not traded in the seller's country which entails that the bidding firm('s quality) may be less known in the seller's country. Also, the regulation in the countries of the target firms may impose restrictions on foreign equity investments. Second, cash offers increase the probability of the bid's success in tender offers, mandatory bids, competing bids, and hostile takeovers and hence are preferred by bidders in such deals. Consequently, a cash payment is likely to be the dominant means of payment in this group of corporate takeovers. Third, the incumbent owners of an unlisted target are more apt to accept cash payment, as one of their primary incentives to sell the firm may be to cash out. Therefore, cash bids are also expected when the target firm is unlisted or closely-held. In sum, we hypothesize *that an equity payment is less likely in tender offers, hostile takeovers, cross-border acquisitions, and acquisitions of unlisted targets.*

B5. Legal Environment Hypothesis:

The legal environment is yet another factor that may affect the choice of a payment method in domestic and cross-border corporate acquisitions. The target firm's shareholders are more likely to accept an all-equity offers in countries with better corporate transparency

standards and stronger shareholder protection. In contrast, bidders are more reluctant to use an equity issue as a payment method in target firms' countries with lower protection of minority shareholder rights. In this case, bidders are more motivated to maintain strong control over their companies in order to maintain their private benefits of control. Therefore, we hypothesize that *an equity payment is more likely to occur in countries with stronger shareholder protection and lower private benefits of control.*

Takeover regulation sets the rules of the takeover process and decides how the takeover rents are divided over the bidder and the target (Goergen et al., 2005). When the target's national takeover legislation is more protective towards the target's incumbent shareholders, these shareholders are able to negotiate more favourable terms of transaction, including their preferred payment method. For example, the seller may reject an all-equity offer in favour of a cash offer if there is high uncertainty about the true value of the bidder's equity.

3. METHODOLOGY

To examine the factors driving the bidder's choice of transaction financing and payment method in corporate takeovers, we develop three different econometric models of the payment-financing decisions. The first model, a multinomial logit, assumes that the bidder makes the choice of the payment method and the sources of financing simultaneously. In this model, the bidder's choice set contains of six mutually exclusive payment/financing alternatives. The second and third models, nested logit models, assume that the bidder makes a sequential choice of the payment method and sources of financing. In the first nested logit, we consider the bidder's decisions about the payment method conditional on the sources of financing. The second nested logit model describes the reverse: it explains the choice of the financing sources conditional on the means of payment.

3.1 Multinomial Logit Model

The first approach to model the bidder's financing and payment decision processes is a joint investigation of the two types of the decisions within a multinomial logit model framework. We assume that each M&A financing/payment choice j corresponds to the NPV³ of the bidding firm $V_j(x)$, where x is a vector of exogenous, observable characteristics of the bidding and target firms and of the bid itself, and j denotes one of the six payment/financing alternatives: (i) cash payment/cash financing; (ii) cash payment/debt financing; (iii) cash payment/equity financing; (iv) mixed payment/cash financing; (v) mixed payment/debt financing; and (vi) equity payment. We assume that the bidder chooses the means of payment/financing that maximizes its value: the

³ This is net of all direct and indirect costs associated with the use of a particular means of financing/payment

bidder chooses alternative j if $V_j(x)$ is the maximum among the 6 possible values. Hence the probability of the choice j is considered as $Pr_j = Prob (V_j > V_k)$ for all other $k \neq j$.

The econometric model assumes that the (unobserved) firm value $V_j(x)$ is a linear function of observed relevant characteristics of the bidder and target and of the bid itself plus random noise. A key property of the multinomial logit framework is the assumption of the independent and identical distribution (*iid*) of the random noise in the value function. This assumption implies that the choices between any two alternatives are independent of the others, i.e. the independence of irrelevant alternatives (IIA) property. That is, if one of the alternatives is removed from the model, the other alternatives will have a proportionate increase in their probability of being chosen. To test for the validity of the IIA assumption with respect to the bidder's financing/payment decision-making process, we apply the Hausman's specification test (Hausman and McFadden, 1984).

The multinomial logit model includes five binary logit models estimated simultaneously. Each binary logit predicts a probability of choosing one of the first five alternatives relative to the probability of choosing the benchmark alternative, which is here the equity payment. The vector of explanatory variables x is the same across all five binary logits. For each alternative j , the log-odds ratio is specified as follows:

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

Pr_j and Pr_0 denote the probabilities that the bidder chooses alternative j and alternative 0 respectively; x is a vector of exogenous, observable characteristics of the bidder and of 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 all-equity payment 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. Thus, when one considers a binary logit model for the choice between cash payment/cash financing and equity payment, a positive (negative) coefficient indicates that an increase in the corresponding variable increases (decreases) the relative probability that a cash payment/cash financing is chosen over an all-equity payment. A positive (negative) coefficient also assumes that the bidder attaches a positive (negative) value to the corresponding characteristic.

3.2 Nested Logit Models

When a decision-making process can be modelled as an n-dimensional choice problem, the multinomial logit model does not produce correct predictions since it may be affected by the undesirable IIA property. For instance, when two or more alternatives belong to a common class, an increase in the probability of one alternative may draw proportionately from a decrease in

probabilities of the other alternatives within the same class, but disproportionately from probabilities of the alternatives outside this class. A nested logit model is a more appealing specification in this context, as it allows to group all the alternatives into subgroups such that the variance may differ across the groups while the IIA assumption is maintained within the groups. The advantage of the nested logit model over the multinomial logit is that it 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 (McFadden, 1981).

Since financing and payment decisions of the bidder can be modelled as a 2-dimensional choice set, we investigate the robustness of the multinomial logit model’s conclusions within a nested logit model framework. To specify the nested logit model, we partition the bidder’s choice set into branches: by payment method and by sources of transaction financing. Two model specifications are considered: Model I in which unobserved factors affect the choice of financing sources conditional on the payment method; and Model II in which unobserved factors affect the payment method choice conditional on the choice of funding sources Figures 1 and 2 illustrate the two models respectively.

Model I: The payment-financing nested logit model

According to Model I, when making the financing-payment choice, a bidder first considers which means of payment he will offer in the acquisition and subsequently decides which sources of financing will be used in the payment. That is, the model estimates the unconditional probability of opting for a specific payment method, and the conditional probability of choosing a specific takeover-financing source (conditional on the chosen means of payment). In this nested model, the IIA assumption is maintained for the sources of financing within the same payment method. The unconditional probability of the financing/payment choice j which includes payment method P and funding source f is modelled as $Pr_j = Pr_{jP} = Pr_P Pr_{f|P}$.

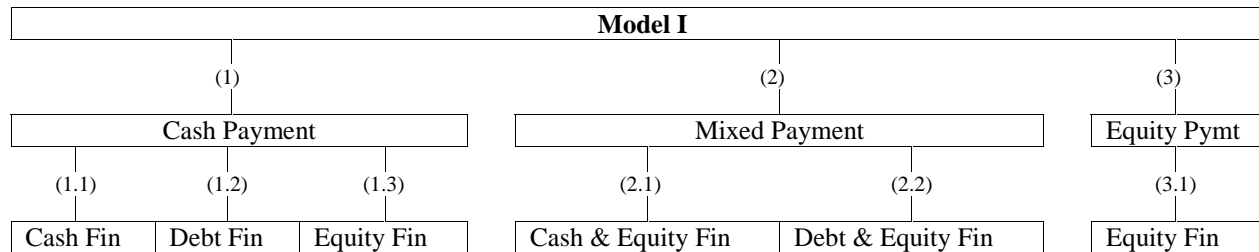


Figure 1. *The payment-financing nested logit model*

The value of each financing source f conditional on the payment method P is modelled as: $V_{f|P}(x) = \beta_f x + \beta_P x + \varepsilon_{f|P}$, where $\beta_f x$ is the additional value from choosing a particular source

of takeover financing f relative to equity financing (or relative to debt and equity financing in case of a mixed payment), and $\beta_P x$ is the additional value increase which results from making a decision to use the means of payment P . The vector of coefficients β_P remains unaltered across all financing alternatives for a particular payment method, while the vector differs across the various means of payment. For each alternative f , conditional on the payment method P , the log-odds ratio is specified as follows:

$$\ln \left[\frac{\Pr_{f|P}}{\Pr_{0|P}} \right] = x' \beta_f$$

As in the case of multinomial logit, the estimated coefficients in the model are not directly interpretable with respect to the probability that a particular alternative is chosen. The coefficients from the nested logit model represent the increases (decreases) in the log-odds ratio (relative to the benchmark case). Thus, if one considers the choice of cash relative to equity as a source of financing conditional on a cash payment: a positive coefficient implies that an increase in that variable increases the relative log-odds ratio of choosing cash over equity to finance the takeover, conditional on the transaction to be paid entirely with cash.

Model II: The financing- payment nested logit model

Model II describes an alternative to the bidder’s decision-making process: the bidder initially decides on the sources of takeover financing and, conditional on this decision, it makes the target shareholders an offer which consists of a value with a specific means of payment. The model estimates the unconditional probability of opting for a source of transaction financing, and the probability of choosing a means of payment in corporate takeover conditional on the source of financing. In this model, the IIA assumption is maintained for the various payment methods for each funding source. The unconditional probability of the financing/payment choice j which includes funding source F and payment method p is modelled as $Pr_j = Pr_{pF} = Pr_F Pr_{p|F}$.

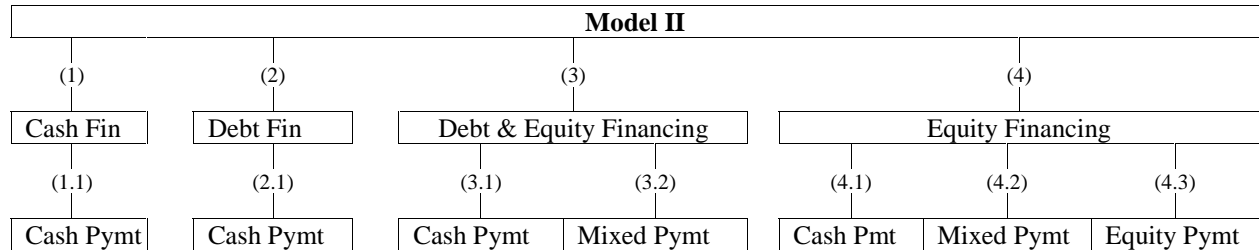


Figure 2. The payment-financing nested logit model

The value of each payment method p conditional on the funding sources f is modelled as $V_{p|F}(x) = \beta_p x + \beta_F x + \varepsilon_{p|F}$, where $\beta_p x$ is the additional value from choosing a particular means of

payment p relative to the benchmark of an all-equity payment (or of a mixed payment in case of debt and equity financing), and $\beta_F x$ is the additional value the bidding firm gets from making a decision to use the source of takeover financing F . The vector of coefficients β_F remains unaltered across all payment methods that are possible for a particular financing source, while the vector differs across the financing sources. For each payment method alternative p , conditional on the funding source F , the log-odds ratio is specified as follows:

$$\ln \left[\frac{\Pr_{p|F}}{\Pr_{0|F}} \right] = x' \beta_p$$

The two nested logit models described above are estimated using the full information maximum likelihood estimation method. While there is no well-defined testing procedure for identifying the best nested logit model specification, we consider the model with the highest number of correctly predicted observations as the best model.

4. DATA SOURCES AND DESCRIPTIVE STATISTICS

The study explores a unique dataset compiled from more than 10 databases. In this section, we describe the data sources and sample selection procedure. We also present the methodology that we use to construct indices capturing the regulatory corporate governance environment by country: a shareholder rights protection index, a creditor rights protection index, a transparency index, and a minority shareholder right protection index. Finally, the section describes the sample composition by means of payment and by the sources of takeover financing.

4.1 Sample selection

We select the sample of European acquisitions launched between 1993 and 2001 – during the fifth takeover wave - from the Mergers and Acquisitions Database of the Securities Data Company (SDC). The SDC was filtered down to intra-European domestic and cross-border takeovers such that both the acquirer and the target are from countries within Continental Europe and the UK. Deals involving firms from Central and Eastern Europe are also included. Only those mergers and acquisitions satisfying the following requirements are retained: (i) the transaction is completed and it involves changes in control⁴; (ii) both parties in the transaction are independent corporations;⁵ (iii) neither the bidder, nor the target is a financial institution⁶; (iv) the bidder's shares are traded on a European stock exchange; (v) the period between two

⁴ We require that either the transaction leads to a combination of businesses or the acquirer held less than 50% of the target company's equity prior the transaction and increased his ownership position to more than 50%.

⁵ To enhance the comparability of the deals we exclude all types of going-private transactions (LBOs, MBOs).

⁶ We exclude M&As in which either a bidder or a target (or both) are banks, unit trusts, mutual funds or pension funds.

consecutive bids by the same acquirer is no less than 300 trading days;⁷ (vi) financial and accounting data for at least one of the participants of the transaction is available in DataStream or the Amadeus, Fame, and Reach databases of Bureau van Dijk .

The quality of the SDC data is verified by comparing the information on the announcement date, the companies' countries of origin, the transaction value, payment structure, share of control acquired, bid completion status, and the target's attitude towards the bid with information from LexisNexis, the Financial Times, and Factiva as the SDC records do frequently not coincide with those of the other sources. All in all, more than 36% of the SDC M&A observations comprised at least one error in the data records mentioned above. These inaccuracies have been amended. The final sample of completed European M&As consists of 1,361 deals. This covers M&As involving firms incorporated in 26 European countries. The characteristics of the final sample are reported in Panel A of Table 1.

The data on the means of transaction financing comes from two sources. First, for each bidding firm, we look for public offerings of debt and equity in the Thomson Financial SDC New Issues database. We assume that a security issue occurs with the aim of financing an M&A transaction if it takes place in the period around the first public announcement of the takeover.⁸ Second, for each takeover, we check the news announcements available in LexisNexis, Financial Times, and Factiva and extract from these announcements information about the sources of M&A financing.⁹ This also allows us to collect data on non-public sources of financing, such as debt and equity issues on a private market or bank loans. All collected information is coded into four dummy variables that take a value of one if a particular means of transaction financing is used: internal funds only, an equity issue, a debt issue¹⁰, or a combination of equity and debt issues.¹¹

⁷ Short periods between two acquisitions made by the same bidder could cause estimation problems of the market model parameters. Therefore, the bids by the same acquirer are excluded if they take place within a period of less than 300 trading days since the previous announcement (240 days estimation period ending 60 days before the event). In addition, if two bids by the same acquirer are announced within an interval smaller than three months (60 days), we eliminated both deals from the sample, as their event windows would overlap.

⁸ In most cases, it is rather straightforward to find the security issues relevant to M&As, as most of the companies from our sample very infrequently opt for public security issuance. When a company makes multiple debt or equity issues in the year of the takeover, we include only those issues that took place in the period starting 60 days before and ending 60 days after the deal announcement.

⁹ For example, from the following announcement I extract information that the acquisition is fully financed with debt: PARIS (AP-Dow Jones)--French company Axa-UAP said Friday it sold its 35%-stake in company Finextel to Sophia for FF458 million. ... Standard & Poor' S considers that this operation, *completely financed by debt*, involve a deterioration of the capitalization of Sophia.

¹⁰ The category 'debt financing' includes both public and private issues of debt securities and bank loans.

¹¹ It is important to note that financing with internally generated funds is at least partially used in every M&A transaction. For simplicity of our analysis, we only differentiate between those transactions which are fully financed with cash and those which also involve sources of financing other than cash.

The ownership and control structure prior to the takeover announcement is collected from different sources, described in the Appendix II. To control for dual class shares, pyramidal ownership structures, multiple control chains, and cross-holdings, all of which are prevailing in Continental European companies, we follow the methodology presented in Barca and Becht (2001) and Faccio and Lang (2002). As bidding firms intend to obtain a majority of voting rights rather than of cash flow rights, we focus on the corporate control structure rather than the ownership structure. First, we consider only the shares with voting rights. Second, as control depends on both direct and indirect ownership of voting equity, we accumulate the voting stakes directly or indirectly controlled by the same ultimate shareholder. To identify the ultimate shareholders, we use a method similar to the ones reported in Renneboog (2000) and Köke and Renneboog (2005).

It should be noted that the M&A activity of the UK is overrepresented relative to its Continental European counterpart because the final sample excludes a substantial number of non-UK bids (575 observations) which lack information about the method of payment. Panel B of Table 1 displays the country-distribution of M&As for which the payment structure was not reported. The highest proportion of M&As with undisclosed payment method is observed in Austria (68% of all bids in the country), Germany (67%), and Switzerland (57%). As this sample selection bias may affect the results of our study, several robustness checks are performed below. In addition, in order to understand better the ‘non-disclosure’ phenomenon we provide a description of the bids with undisclosed payment method. In Section 6.4, we investigate what motivates companies to conceal the terms of their M&A transactions.

4.2 Capturing the regulatory environment

To capture the impact of the regulatory environment on the firm’s financing and payment decisions, we construct a number of legal environment indices. With the help of 150 corporate lawyers in 32 European countries, we have created a corporate governance database that comprises the main changes in corporate governance regulation in all European countries (including countries from Central and Eastern Europe) over the last 15 years.¹² For each country, we quantify the legal regulations according to their effectiveness in mitigating one of the conflicts of interests between the main corporate constituencies: the agency problems which arise between the management and the shareholders, those between majority and minority shareholders, and those between creditors and shareholders. We also quantify regulatory provisions aimed at improving the transparency of corporate information. The following four indices are constructed.

¹² Detailed description of the database is available at http://center.uvt.nl/phd_stud/martynova/CG_Database.pdf

The shareholder rights protection index (SHAREHDR PRT) is based on shareholders' ability to mitigate managerial opportunistic behavior. The index increases with the number of legal provisions that provide shareholders with effective power to appoint and dismiss the board of directors and to control most of the important corporate decisions (like equity issues or takeovers). We also quantify and add to the index the regulatory provisions aimed at ensuring that the board of directors acts as an independent body operating on behalf of all shareholders to monitor top management. A higher index score represents a higher likelihood that management acts in the interest of shareholders. The constituting elements of the index and their coding are given in Appendix III.

The creditors protection index (CREDITOR PRT) 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 firm. To create the creditors rights index, we closely follow the approach of LaPorta et al. (1998) and investigate the regulation related to the violation of debt covenants (debtor priority ranking in case of financial distress), the possibility of debtors to impose restrictions on borrowers (e.g. limitations on filing for reorganization/liquidation), and the creditors rights in financially distressed firms (e.g., automatic stay on assets). To emphasize the difference between creditor-oriented and debtor-oriented bankruptcy codes, we increase the creditor rights index for a country with a pure liquidation code by one, while leaving the index unchanged for a country with a debtor-oriented code.¹³ This is because the bankruptcy code that facilitates reorganization focuses on corporate survival, usually at the expense of the (more senior) creditors. Higher index score indicates stronger creditor rights. The details about the calculation of the creditor rights index are given in Appendix III.

The transparency index (TRANSPARANCY) is based on the quality of information about company and management. It should be noted that the intention of this index is not to capture the quality of the accounting procedures because this is usually not incorporated in corporate law but is set by accounting standards boards. The transparency index reflects the degree to which the market is informed about the corporate policies and contracts directly related to the management and the frequency with which this information is released. More specifically, we quantify the extent to which information is released on the managerial compensation package (on an aggregate or individual basis, if at all) and the requirement to disclose any transactions between management and company (e.g. consulting contracts, interest-free loans). The transparency index is also higher when the law or the stock exchange regulations include a comply-or-explain principle. This requirement (hence a legal or regulatory basis) to comply or explain is a

¹³ Chapter 11 in the US is the prototype of a debtor-oriented code. In the 1990s, many bankruptcy codes have been reorganized and now frequently include two tracks: a debtor-oriented part (e.g. Administration in the UK) and a pure liquidation code. we classify such bankruptcy codes as debtor-oriented.

mechanism forcing companies to disclose additional information about the company to investors. A higher index score reflects more transparency about corporate activities and profits (see Appendix III).

The minority shareholder protection index (MINORITY PRT) rests on the regulatory provisions aimed at increasing the relative power of the minority shareholders in the presence of strong majority shareholders. In a firm with concentrated ownership, it is possible that the dominant shareholder influences managerial decisions to his own benefit which may lead to expropriation of the rights of the minority shareholders. To construct an index representing the relative power of the minority and the majority shareholders, we quantify the regulatory provisions on the minority shareholder rights (board representation, minority claims, extraordinary general meetings, blocking minorities), the one-share-one-vote principle (dual class shares, voting caps, break-through rule, equal treatment principle), ownership transparency and the relative power in case of a takeover threat. A higher index score reflects a better representation of minority shareholders interests. For the constituting elements of the index and their coding: see Appendix III.

LaPorta et al. (1998) argue that a strong system of legal enforcement could substitute for a weak legal investors protection environment, as well-functioning courts can effectively resolve disputes between corporate constituencies. To address these issues, we multiply the created legal environment indices by the index capturing 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) developed by the World Bank¹⁴. The rule of law index 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. The corruption index measures the extent to which one can exercise public power for private gain. The presence of 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 national judicial systems are more effective.

It is worth noting that all legal indices employed in this paper are time-varying and incorporate all changes in legal environment since 1990.

4.3 Sample statistics

Table 1 (Panel A) shows the sample composition by payment structure and sources of transaction financing. A large majority of M&A deals (63%) are entirely cash-paid¹⁵ whereas the

¹⁴ More information on the indices is available at <http://www.worldbank.org/wbi/governance/>

¹⁵ This percentage is lower than 80% reported for European all-cash M&As in Faccio and Masulis (2004). The difference may be driven by the fact that we exclude of divestitures (acquisitions of subsidiaries) and cross-border

remainder is at least partially paid with equity. Countries in which equity payments are most frequently observed are the UK (45% of all bids in the country), Sweden (39%), and Norway (36%). Of all the bids involving an equity payment, one half are pure equity exchange offers. The second half are mixed offers that on average contain 53% cash and 47% equity. In almost all the countries, acquirers prefer all-equity payment to the combination of equity and cash. The only exception is UK and Irish acquirers, who use the mix of cash and equity as a payment method more frequently than pure equity.

The dominant source of cash in the all-cash and mixed offers is internally generated cash flow. Out of 854 entirely cash-paid acquisitions 590 (68%) are fully financed with internal funds. Acquirers incorporated in the Benelux (except for the Netherlands) and the Scandinavian countries rely most frequently on internal sources of financing. The second most prevalent means to raise cash is the debt issue, observed in 215 (28%) all-cash bids. Debt financing is more frequently used in acquisitions paid with a mix of cash and equity (37%) rather than in bids entirely paid with cash (28%). However, the reverse can be observed when comparing mixed offers with all-cash bids that involve at least some equity financing. Out of 91 pure cash offers involving equity financing, in 42 (46%) bidders also do a debt issue. This exceeds the frequency of debt financing observed in the combined cash-and-equity offers (37%). The proportion of debt-financed deals is highest in the UK (39% of all bids in that country), Netherlands (38%), Ireland (35%), and Switzerland (27%). The least used source of cash financing in corporate acquisitions is an equity issue. Only 11 percent of acquirers that announce an all-cash bid issue new equity to finance the purchase. Of these bidders, two-thirds are from the UK, whereas the remainder are French, Irish, and Scandinavian firms. The number of all-cash offers financed with equity is more than five times lower than the number of M&As paid with equity. This suggests that acquirers prefer to make a direct equity payment to the target shareholders rather than a cash payment funded by a new equity issue.

5. UNIVARIATE ANALYSIS

Tables 2 and 3 present the average values of the variables hypothesized to affect the sources of financing and the means of payment. The variables in the tables are classified according to the hypotheses discussed in Section 2. To test the null hypothesis of no significant differences between the mean values of variables for each of the payment types and the different funding sources, a Wald test and the corresponding χ^2 -statistics are reported.

5.1 The determinants of a means of financing

acquisitions of US targets, which represent a substantial fraction of Faccio and Masulis' sample and are most likely to be pure cash offers.

Table 2 indicates that bidder characteristics vary substantially across the different types of sources of finance. In line with the predictions of the pecking order theory, panel A1 of Table 2 reports that cash-rich bidders opt to finance their M&A transactions entirely with cash, whereas firms with insufficient internal funds explore external sources of financing: debt and equity. When a deal is entirely financed and paid with cash, the bidder's internally generated funds and cash surpluses significantly exceed the amount of a takeover payment (as indicated by variables CFLOW/TRVAL and CHLDG/TRVAL). Debt issues are used to finance a takeover when the bidder has a significant shortfall in internal sources of cash (reflected by the low average values of CFLOW/TRVAL and CHLDG/TRVAL), whereas equity issues are preferred when the firm has medium needs for external funds. However, the acquisitions financed and paid entirely with equity are the exception to this rule: bidders in these deals exhibit the weakest potential to finance their acquisition payment with internal sources of funds.

The data also show that bidders using external financing have a higher percentage of tangible assets (COLLATERAL) than those that relying on internal financing. As tangible assets represent a collateral for outside investors, firms with higher percentage of tangibles can more easily attract external financing. Among the companies raising external capital, equity issuers tend to have lower debt capacity, which is indicated by high leverage value (FIN LEVERAGE). Overall, the evidence suggests that equity financing takes place when a company has insufficient cash funds and limited debt capacity.

To examine whether or not the finding above is driven by the bidder's pecking order preferences and not by financial constraints, we also investigate whether firms for which there is a higher degree of information asymmetry are more likely to select cash or debt rather than equity as a means of financing. To measure the magnitude of information asymmetry associated with the true value of the bidding firm we consider two proxy variables: the firm's age (AGE) and its exposure to the market risk (BETA). With both measures, we find evidence contradicting the pecking order: in spite of the significant adverse signal that equity issues trigger, bidders with a higher degree of information asymmetry (young firms with high beta) still prefer to finance M&A deals with equity rather than debt or cash (see Panel A6/A7 of Table 2).

Panel A2/B3 of Table 2 suggests a plausible explanation for this phenomenon: equity issues take place when financial markets are positive about the firm's fundamental value and hence tend to under-react to a negative signal triggered by the announcement of an equity issue. In anticipation of this under-reaction, managers time equity issues after periods of a strong share price performance. The panel indicates that equity financing is preceded by a significant share price run up (RUNUP). Bidders that finance acquisitions with equity accumulate premiums of around 2.8% over the window [-60, -20] prior to the bid announcement. This is notably higher

than the 0.3% and 0.9% cumulative average abnormal returns (CAARs) on shares of companies that use cash and debt financing, respectively.

There is evidence that managers of widely-held companies are more likely to issue equity. Panel A3 of Table 2 indicates that almost half of all acquisitions that are entirely financed with equity (48% of cases) are made by widely-held bidding firms. In contrast, widely-held bidding firms are involved in only a one-third of all-cash financed M&As. The finding is in line with the agency costs of equity hypothesis, which states that managers of firms with a diffuse ownership structure are more likely to lack effective monitoring and prefer equity financing to increase the funds under their discretion. Strikingly, widely-held companies dominate among bidders that finance their takeovers with debt (61% of cases). This is likely to be due to the UK and Irish acquirers, most of which have widely dispersed ownership.

The choice of debt financing by companies with a dispersed ownership structure may also be the result of 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 commit to debt financing to constrain their discretion over corporate funds and hence reduce likelihood that their company be taken over (Zwiebel, 1996). However, Panel A4 of Table 2 gives no support for this argument: external financing via borrowing takes place when the managers of bidding firms are least exposed to monitoring by the market for corporate control (as indicated by low value of TO THREAT variable¹⁶). The highest likelihood of being acquired is observed for companies that use their shares as a means of payment thus suggesting that an all-equity acquisition may represent an alternative anti-takeover defence measure.

Panel A5 of Table 2 exhibits significant variation across the funding sources in average values of the proxy variables for the bidder's growth opportunities. The bidder's Q-ratio in equity-financed acquisitions significantly exceeds the Q-ratio of their peers in debt-financed bids. Similarly, equity issuers have the highest average growth rate in sales (SALES 3YGR), capital expenditures (CAPX 3YGR), and total assets (TA 3YGR) over the 3 years prior to the year of the acquisition. We interpret these results as evidence that companies with good growth opportunities prefer equity to debt financing to avoid conflicts of interests between firm's shareholders and debtholders and to maintain flexibility in managing corporate funds.

The results reported in panels A1 and A6/A7 of Table 2 support the agency cost of debt hypothesis. Although companies that finance the payment of the acquisitions with debt sustain a high level of leverage, they have relatively low exposure to the market risk (BETA), our proxy for

¹⁶ To measure firm's takeover vulnerability we estimate probit model that predicts the likelihood that a firm becomes a target in corporate takeover. The dependent variable in the probit model equals 1 if company is a target in takeover and 0 otherwise. The set of independent variables is taken from a prior literature seeking to explain the probability of takeovers (Hasbrouck, 1985; Palepu, 1986; Ambrose and Megginson, 1992; Cremers et al., 2005). The estimated parameters of the model are reported in Appendix VI.

the firm's volatility. In contrast, bidders opting for equity financing have a high level of leverage and a high non-diversifiable systematic risk (both measures are significantly exceeding those of bidders in debt-financed deals). This suggests that equity-issuing firms suffer from agency problems of debt (Jensen and Meckling, 1976). As such, these acquirers have no choice but to raise capital via the stock market, as they are too risky to obtain a bank loan or to issue cheap risky debt.

There are no statistically significant differences in tax liabilities (TAX LIAB) across the different sources of funding, which rejects the debt tax shield hypothesis (panel A8 of Table 2). As discussed in Section 2, this evidence may be largely driven by the fact that the tax advantages of debt may be offset by the increasing likelihood of financial distress, by non-debt tax deductions, and by differences in capital gains and income taxes. Therefore, we conclude that tax shields of the bidding firm are not a dominant determinant of the choice of sources of transaction financing.

Finally, panel A9 of Table 2 reports the average values of variables employed to proxy for the regulation environment. When shareholder protection is strong, bidders are more likely to use external sources of financing (panel A9 of Table 2). Similarly, creditor protection is positively related to the choice of debt (and equity) issues as a means of takeover financing. In addition, funding with external sources is more likely if the bidder is from a country with better corporate transparency standards (see panel B5 of Table 3). Bidders rely on internally generated funds as a means of transaction financing in countries with the weakest creditor and shareholder protection and the lowest corporate transparency standards. This evidence is in the spirit of LaPorta et al. (1998) who argue that better protection of investors from expropriation by entrepreneurs facilitates the development of well-functioning capital markets and guarantees lower costs of financing.

To summarize, the results of the univariate analysis of the means of takeover financing are supportive of the following theoretical predictions. First, financial constraints play a large role in the takeover financing decision of bidding firms, but the choice of sources of finance is not entirely explained by the pecking order theory. Second, market timing influences the bidder's decision to use an equity issue as a means of financing. Third, the agency costs of equity, the agency costs of debt, and the debt overhang problem play a role in the decision to use equity financing. Fourth, the bidder's choice between cash, debt, and equity financing is sensitive to the efficiency of the regulatory corporate governance environment in which the bidder operates. At the same time, there is no support for the hypotheses stating that the choice of transaction financing is influenced by a takeover threat, the financial flexibility, or debt tax shields.

5.2 The determinants of a means of payment

Panel B1 of the Table 3 shows that bidders making acquisitions with an all-equity offer have significantly higher market capitalisations (MVAL) than their peers making all-cash and mixed bids. These findings are consistent with the view that large companies have better access to external financing than small and medium size companies. However, bidder size has a non-linear effect on the likelihood that a payment involving equity (all-equity or mixed bids) is chosen. We find that an equity payment is used by both very large and very small companies: bidders with the highest market value pay entirely with equity and bidders with the lowest market value pay with a combination of equity and cash.

The choice of mixed payments by small companies is likely to be triggered by risk sharing concerns. Our evidence shows that firms with a low market capitalization acquire firms of a similar size (TRVAL), so that the target's assets constitute a sizeable addition to the acquirer. This may entail substantial losses to the acquiring firm in case of a downward post-acquisition revaluation of the target. The bidder can reduce the risk of such a downward revaluation by offering the target's shareholders a continued participation in the combined company (Hansen, 1987). Therefore, we conclude that by offering at least some equity, small-size bidders pursue the risk-sharing strategy. This conclusion is also valid for bidders in all-equity acquisitions, where both bidder's market capitalization and transaction value are especially high.

Corporate governance concerns of bidding firms have also a significant impact on the choice of payment method (panel B3 of Table 3). All-equity bids create a new large shareholder in the acquiring firm with an average voting stake of 16.2%. If all-cash or mixed offers would be entirely paid with equity, the new shareholders would control a stake of 6.7% and 13.9% respectively. However, the control reduction by 16% caused by all-equity acquisitions is unlikely to change the positions of the shareholders of the bidding firms, as the bulk of these companies are diffusely owned (49% of firms) or controlled by a blockholder with supermajority voting rights (12% of firms). In contrast, the greater part of bidding firms in all-cash acquisitions (52% of firms) are controlled by shareholders with an intermediate level of voting power ranging between 20% and 60%. This evidence supports the control loss hypothesis: the bidder's management prefers cash over equity as a means of payment if this would threaten the continued control of their largest shareholders. Strikingly, managers of widely-held bidding firms are not averse to equity offers, even though these deals may create an outside blockholder which may bring about strict monitoring.

To test for the equity-misvaluation hypothesis, we consider the RUNUP variable. Panel A2/B3 of Table 2 shows that bidder CAAR over window [-60, -20] prior to the bid announcement is highest in all-equity offers and lowest in all-cash offers. The run-up premium is positive for all types of acquisitions (except for those with undisclosed payment structure), but is statistically significant (at 1% confidence level) only in the bids that involve equity payments. It

seems that overvalued bidders use their equity to buy real assets of undervalued (or less overvalued) targets with the intention to take advantage of the mispricing premium over the long term (Shleifer and Vishny, 2003; Rhodes-Kropf and Vishwanathan, 2003).

Panel B4 of Table 2 reports that the percentage of cross-border deals (CBORDER BID) and hostile takeovers (HOSTILE BID) is highest when cash is offered (32% and 6% of cases respectively) and is lowest when mixed payments (12% and 4% of the cases) or all-equity payments (19 and 4% of cases) are made. This is in line with the hypotheses that cross-border bidders offer cash because they anticipate the seller's aversion to a payment with foreign equity (due to a home bias), whereas hostile bidders select cash payments to maximize the likelihood of the bid's success.

In contrast to hostile bids, unopposed tender offers (TEND OFFER) are more frequently paid with equity (39% of the transactions) than with cash (33%), and are least frequently paid with a combination of equity and cash (27%). The high frequency of equity-paid tender offers is somewhat surprising as one would expect an equity offer to reduce the probability of the success of the public bid. However, this phenomenon can be explained by the fact that the bulk of equity-paid tender offers in our sample are UK domestic acquisitions. Since the UK City Code makes cash payment compulsory if the bidder makes an equity offer, the offers are usually designed in such a way that leaves the target's shareholders indifferent between accepting cash or equity.

Acquisitions of listed targets (LISTED TARGET) occur more frequently with all-equity bids (59% of the cases) than with all-cash bids (44%). Mixed bids on listed targets are more rare (28%). One reason is the control loss.¹⁷ Alternatively, the target's owners are likely to demand cash payment if their sale is motivated by the intention to cash-out.

Panel B4 of Table 3 reports no significant differences in the frequency of intra-industry acquisitions (INTRA-IND BID) across different types of payment methods. It seems that the business strategy (focus or diversification) does not influence the choice of the means of payment.

Panel B5 of Table 3 shows that the legal environment affects the payment method choice. Bidders are more likely to launch all-equity bids in countries with lower protection of minority shareholder rights. This contradicts the prediction that bidders are more reluctant to make an equity payment when private benefits of control are high. However, since the bulk of the bidding firms in countries with lower protection of minority shareholder rights are characterized by a majority or a near-majority of shares held by one or few large investors, the control loss caused by an all-equity payments is unlikely to threaten the control positions of these large shareholders.

¹⁷ Since unlisted targets are usually privately owned by one or a group of large shareholders, an equity payment may create an outside blockholder and thereby threaten the existing control structure in the bidding firm. In this case, the bidder may prefer a cash payment over an equity payment.

Overall, the univariate analysis of the payment method choice reveals that corporate control retention by the bidder's large shareholders, risk sharing as well as information asymmetries between bidding and target firms explain part of the payment decision. Another important determinants of the payment decision are equity overvaluation and the characteristics of the transaction such as the fact that the takeover is cross-border, hostile, and regards a listed target. Finally, weak legal protection of minority shareholder rights encourages bidders to pay for their acquisitions with equity.

6. MULTIVARIATE ANALYSIS

While the results of Section 5 are based on a univariate comparison, we now turn to a multivariate analysis to explore the combined effect of the characteristics of the bidding and target firms and of the offer on the bidder's financing/payment choice. Since the bidder's decisions about the payment method and sources of financing are contingent upon one another, we use multinomial logit and nested logit estimators to analyse jointly the two decision processes. Multinomial logit assumes that the bidder makes a simultaneous choice of the payment method and sources of financing. That is, the bidder considers six payment/financing alternatives. In a nested logit model, we assume that the bidder makes his choice between the various means of payment and the different sources of funds sequentially. The bidder first decides on the mode of payment (source of financing) and conditional on this decision, it chooses the source of financing (payment method). Two nested logit model specifications are analysed: model I estimates the choice of financing sources conditional on the payment method, whereas model II estimates the choice of the payment mode conditional on the financing sources. We also investigate what motivates bidders to conceal the terms of their takeover transactions (including the payment method).

6.1 Multinomial Logit Model: simultaneous payment/financing decision

Table 4 reports the results from the multinomial logit model of the bidder's simultaneous decisions about the means of payment and the sources of takeover financing. The model contains five binary logit models that predict the probability that a particular combination of payment and financing is chosen in relation to an equity payment.

We find that, independently of the alternative financing/payment choice, the probability of an all-equity bid increases with the relative size of the takeover transaction and with the share price run-up prior to the bid announcement. All-equity bids are also more frequent if the acquisition takes place in the period 2000-2001 and when the target is listed and in the same industry as the bidder. Thus, it seems that these findings confirm that this type of offer (all-equity) takes place for reasons of risk sharing and equity misvaluation.

We also document that the cash flow of the bidding firm standardized by to the takeover value is positively correlated with an all-equity offer (the benchmark is a mixed offer). However, this variable is negatively correlated with the all-equity offer if the benchmark offer consists of cash and is entirely financed with internally generated funds. In other words, cash-rich bidders prefer to finance and pay for their takeovers entirely with cash, bidders with medium sources of internal funds opt for all-equity financing/payment, and those with cash deficits make a mixed payment. The results suggest that the choice to pay entirely with equity is driven by motives other than financial constraint because the bidders opting to make an all-equity offer also have sufficient funds to finance their bids with cash. Financial constraint concerns seem to drive the choice to make a mixed offer.

Large bidders are more likely to use external sources of financing (equity and debt). Relative to the probability that an all-equity payment is used, the probability of cash-financed mixed payment decreases with market value, whereas that of mixed payment financed with debt increases with a larger market value. The decision to finance corporate takeovers with debt also is sensitive to the bidder's debt capacity. Firms that choose a cash offer financed with debt have relatively low leverage compared to those that make an all-equity offer. A high market-to-book ratio is an important determinant of the choice between mixed payment based on cash financing and all-equity payment. It seems that bidders with good growth opportunities try to limit sharing their future profits with outsiders by offering the target shareholders a payment which only partially contains equity instead of all-equity payment.

In support of the control loss hypothesis, we find that an all-equity offer is less likely than an all-cash offer if the all-equity acquisition threatens the control position of the bidder's dominant shareholders. The presence of a large shareholder controlling an intermediate voting stake is positively related to the probability of an all-cash offer.

The choice of financing/payment method is also sensitive to the regulatory corporate governance environment in which the bidding firm operates. An all-equity offer is more likely than a cash-paid/cash-financed acquisition when the bidder is from a country with better shareholder and creditor rights protection. However, when the legal protection of creditor rights is high, the bidder prefers the debt financing of a cash-paid offer rather than an all-equity offer. Minority shareholder right protection is negatively associated with the choice of all-equity payment. When minority protection is high, the bidder is more likely to opt for a mixed payment or cash payment financed with debt. The only case when minority protection is positively correlated with an all-equity bid is when the bidder has to choose between an equity payment and an equity-financed cash payment.

The binary logit for the choice between an equity payment and an equity-financed cash payment provides an explicit answer to the question of what motivates the bidder to make equity

offers rather than cash offers (financed by raising equity in the secondary market) to the target shareholders. Column 3 of Table 4 shows that the choice between these two alternatives largely depends on the characteristics of the takeover bid. In particular, a cash payment is more likely in a cross-border bid. However, an equity payment dominates a cash payment financed by an equity issue in acquisitions of a listed target and acquisitions launched at the decline of the takeover wave in 2000-2001. The choice between equity and cash payment/equity financing is also sensitive to the regulatory protection of minority shareholder rights: an equity payment is more likely when the bidder is from a country with better minority shareholder protection standards.

The multinomial logit presented in Table 3 also reveals a number of facts previously uncovered in the literature. In particular, the binary logit models presented in columns 1 and 2 of Table 4 indicate that there is a significant difference in the determinants of cash-paid/cash-financed and cash-paid/debt-financed acquisitions. The only common factor that determines both types of bids is the relative size of the transaction: the probability of both choices (relative to an all-equity payment) decreases with the relative size of the target firm. This suggests that the relative size of the transaction is the key determinant of the choice of an all-cash payment over all-equity payment, whereas the other factors that are found in existing empirical literature to affect the choice between the two means of payment are actually related to the choice of financing sources. Therefore, the risk-sharing concern seems to be one of the most important factors that forces bidders to pay for their acquisitions with equity rather than cash.

Another interesting fact emerges when we compare the determinants of the cash payment/equity financing choice and those of the mixed payment/equity financing choice. The two alternatives are identical in their sources of financing (cash and equity), but differ in the means of payment. Strikingly, columns 3 and 4 of Table 4 show that the choices of these two alternatives over an all-equity payment are driven by totally different considerations of the bidding firm. This lack of common determinants confirms that these two alternatives are primarily determined by the choice of the payment method and not by the choice of sources of financing.

A comparison of the determinants of the mixed payment/cash financing choice and of the mixed payment/debt financing choice yields additional evidence that the payment method choice is likely to be a primary concern of the bidding firm. Both alternatives are identical in terms of the means of payment. These two alternatives have also some similarities in terms of their likelihood of being preferred over the all-equity offer. Both mixed payment/cash financing and the mixed payment/debt financing are more likely than an equity payment when the bidder has an internal funds deficit and when the bidder is from a country with better minority shareholder rights protection. Therefore, we consider insufficient internal funds and better legal protection of

minority shareholder rights as the two key determinants of the preference of a mixed payment over an all-equity offer.

6.2 Nested Logit Model I: sequential financing-payment decision

Table 5 presents the results of the nested logit model where unobserved factors affect the choice of financing sources conditional on the payment method. This model tests the hypotheses on the decision regarding of the transaction financing conditional on an all-equity or mixed offer. The model also gives unconditional estimates of the value of an all-cash, mixed, or all-equity payments for all types of sources of funds.

The results on the payment method choice are reported in columns 1 and 2 of Table 5. Bidding firms with a dispersed ownership structure and firms with a concentrated ownership structure characterized by an intermediate level of voting rights held by dominant shareholder are more likely to finance the acquisitions entirely with cash rather than with equity. The likelihood of a cash payment also increases when the bidder undertakes a cross-border or hostile takeover bid and when it operates in a legal environment with better protection of minority shareholder rights. Bidders with a high share price run-up and high exposure to the market risk are more likely to choose an all-equity payment over an all-cash alternative. A takeover bid on a listed, relatively large firm is more likely to be financed with equity rather than with cash or a combination of cash and equity. In addition, an all-equity payment is preferred over a mixed payment when the bidding and target firms operate in the same industry and the bidder is from a country with strong shareholder rights protection.

Columns 3 and 4 report the results on the choice of financing conditional on an all-cash offer. When the bidder decides to make an all-cash offer, the probability of issuing equity relative to the probability of using internal funds to finance the takeover increases with the bidder's share price run-up, Q-ratio, and market value. In contrast, cash-rich bidders opt to finance their deals entirely with cash. All-cash acquisitions undertaken in the decline of the takeover wave are more likely to be financed with cash rather than with equity. The probability of debt financing relative to the probability of equity financing in all-cash offers increases with the bidder's collateral, exposure to market risk, the degree of minority shareholder rights protection, and the level of creditor rights protection.

When a mixed offer takes place, the choice of financing with internal funds (relative to financing with debt) increases with a higher leverage ratio, Q-ratio, and cash flows standardised by the transaction value. However, a debt issue is more likely as a source of takeover financing when the bidder has a high market value and is from a country with better corporate transparency standards. In addition, conditional on a mixed offer, debt financing is more likely than cash financing in acquisitions launched in 2000-2001 when takeover activity slows down.

6.3 Nested Logit Model II: sequential payment-financing decision

Table 6 presents the results of a nested logit model that predicts the probability of the all-cash and mixed payment choice conditional on the sources of financing. The model also estimates the unconditional probabilities of the choice of financing (internal funds, borrowing, or an equity issue) for all types of payment methods.

Columns 1 through 3 describes the sensitivity of the bidder's financing source to different exogenous factors. In particular, the choice of cash over equity financing is sensitive to the bidder's takeover vulnerability, its cash flow, the presence of a large blockholder with more than 20% voting rights, and the level of shareholder rights protection. Whereas cash-rich bidders with a concentrated control structure tend to prefer cash to equity financing, bidders that are incorporated in a country with a better protection of shareholder rights prefer to finance their acquisitions with equity. Equity financing is more likely to be chosen over debt financing when the bidder has low debt capacity and experiences a significant share price run-up prior to the takeover announcement, whereas the probability of debt financing increases with the firm's market value. The legal environment is another important determinant of the choice between an equity issue and borrowing as a means of takeover financing: better creditor and minority shareholder protection encourages companies to finance their acquisitions with debt, whereas better shareholder protection leads to equity financing. Bidders with high collateral, high market value, and better corporate transparency standards are more likely to use borrowing in addition to an equity issue as a means of financing. However, bidders with high market-to-book ratio and excessive internal funds avoid making a mixed offer financed by equity and borrowing.

Conditional on the decision to finance a takeover with equity, the bidder faces a choice between three payment methods: all-cash, mixed, and all-equity payment. The firm is likely to choose a cash payment over an equity payment when it launches a cross-border bid or makes a public offer to the target firm shareholders. On the other hand, the bidder chooses to pay with equity when it acquires a relatively large target firm. In addition, conditional on an equity issue as the source of financing, widely-held bidding firms and firms from countries with better minority shareholder protection are also more likely to make an offer with equity rather than cash. All-equity payments are also preferred to all-cash payments financed by an equity issue in M&As launched at the decline of the fifth takeover wave. The likelihood of a mixed payment (relative to an all-equity payment) increases with the effectiveness of legal provisions aiming at protecting minority shareholders. However, an all-equity payment dominates a mixed payment when the bidder acquires a large listed target and when both the bidder and target operate in the same industry.

When the bidder decides to finance its acquisition with a combination of equity and debt, its choice set of payment method contains of two alternatives: an all-cash or a mixed payment. The bidder is more likely to pay entirely with cash if it launches the bid to acquire a foreign target, if the bidder adopts a focus strategy or makes a public tender offer. A mixed payment is more likely when a target firm is large and the bidder is more exposed to market risk.

6.4 Probit model predicting bids with undisclosed payment method

As mentioned in the data Section 4.2, the sample of European mergers and acquisitions excludes a substantial number of acquisitions that lack information about the terms of transaction including the means of payment. The highest proportion of M&As with undisclosed payment method is observed in Austria (68% of all bids in the country), Germany (67% of all bids in the country), and Switzerland (57% of all bids in the country). To better understand the ‘non-disclosure’ phenomenon, we investigate what motivates companies to conceal terms of their M&A transactions.

Table 7 reports the estimated probit model of the decision to disclose or conceal the terms of the acquisition. The model indicates that an ‘undisclosed’ takeover is more likely when the bidding firm is controlled by a large shareholder, intends to acquire majority control, and is from a country with weak legal protection of minority shareholders. These findings suggest that the terms of the acquisition are concealed when the acquisition intends to expropriate the rights of the minority shareholders. First, the presence of a controlling shareholder may be associated with the blockholder’s opportunistic behaviour towards the bidder’s minority shareholders: the blockholder launches a takeover bid to transfer wealth from minority shareholders to themselves (Faccio and Stolin, 2004). Second, a control transfer (the acquisition of a majority stake) may lead to expropriation of the rights of the remaining minority investors in the target firm. Third, weak protection of minority investor rights allows the controlling blockholder to exploit private benefits of control at the detriment of these shareholders (see e.g. Zingales, 1994; Nenova, 2003). Fourth, Martynova and Renneboog (2005) document that the returns to the shareholders of both the bidding and the target firms realized in the period around the announcement of the bid are significantly lower when the bidder conceals the terms of the transaction. In this case, the bidder’s shareholders bear a significant loss of 5.7% over a 6-month period around the announcement of the bid. Overall, it seems that the bulk of ‘undisclosed’ acquisitions are motivated by minority investor expropriation.

Previous results on the importance of private benefits of control in European corporate takeovers yielded no support for the hypothesis that controlling shareholders use acquisitions to expropriate resources to their benefit (Faccio and Stolin, 2004; Holmen and Knopf, 2004). Our evidence suggests that the lack of empirical evidence for the expropriation motive of takeovers is

likely due to the fact that these studies focus on M&As with known terms of transactions while disregarding ‘undisclosed’ M&As. Therefore, an analysis of the ‘undisclosed’ takeovers subsample constitutes a prominent area for future research.

Table 7 reports that acquisitions with undisclosed means of payment may also be a result of low disclosure requirements in the countries where these bids were conducted. In particular, the probability of ‘undisclosed’ acquisition decreases with corporate transparency standards in the bidder’s country. However, this result is largely driven by cross-border acquisitions, as the transparency index is insignificant when the model is estimated for domestic bids alone. When a foreign target is acquired, the transparency standards of the target country also affect bidder’s decision to conceal the terms of transaction, with higher standards leading to more disclosure. Furthermore, investors are more likely to be informed about the details of the takeover deal when shares of the target company are traded on a stock exchange. This finding provides additional confirmation that bidder’s decision to release the terms of takeover is sensitive to the disclosure requirements (which are the highest for the public firms).

Finally, the estimates reported in Table 7 reveal that bidder’s decision to conceal the terms of a takeover is more likely when the firm is from a country with high creditor rights protection. One possible explanation may be that ‘undisclosed’ takeovers are actually financed with debt, as debt financing is most likely when creditor rights protection is strong.

7. CONCLUSIONS

In this paper, we analyse the choices regarding the sources of financing and the payment methods in European corporate takeovers launched during the period 1993-2001. Using a unique, comprehensive dataset, we examine the impact of financial constraints, asymmetric information, agency problems, and corporate control concerns on the bidder’s financing/payment decisions. We show that all-cash offers financed with external sources of financing (debt or equity) are frequently employed. The number of all-cash offers financed with equity is more than five times lower than the number of M&As paid with equity. This proportion has been increasing over time, with the number of all-equity bids almost 10 times exceeding the number of cash-paid but equity-financed bids in the years 2000 to 2001.

We jointly estimate the factors that are related to the probability that a bidder opts to pay for the acquisition with equity, cash, or a combination of equity and cash, and that he chooses to finance the transaction with internally generated funds, a new equity issue, or borrowing. The analysis paper reports five main results. First, financial constraints are an important determinant of the bidder’s decision about which source of finance to use in the takeover bid. Bidders are likely to finance and pay for their takeovers entirely with cash when their internally generated funds and cash surpluses significantly exceed the asking price of the target firm. Bidders opt for

debt issues when they face a significant shortfall in internal sources (cash), whereas equity financing takes place when a company has insufficient cash funds and limited debt capacity. This result is driven by the bidder's financial constraints and not by the pecking order of finance. In contrast to what is predicted by the pecking order, bidders for whom there is a higher degree of information asymmetry are more likely to select equity over debt as a means of financing in takeovers. In spite of the significant adverse signal that equity issues trigger, these bidders still prefer to finance M&A deals with equity rather than with debt.

Second, market timing is a fundamental factor of the bidder's decision to use equity as a means of financing/payment. Both the decisions about equity financing and equity payments are preceded by a significant share price run-up. Equity issues take place when financial markets are positive about the firm's fundamental value such that they tend to under-react to a negative signal triggered by the announcement of an equity issue. Moreover, overvalued bidders are likely to use their equity to buy real assets of undervalued (or less overvalued) targets with the intention to take advantage of the mispricing premium.

Third, risk sharing by bidding firms has a significant impact on the choice of payment method. The likelihood of equity payments increases with the relative size of the transaction. That is, a bidder is more likely to offer equity when the target's assets constitute a sizeable addition to the acquirer. By offering the target's shareholders a continued participation in the company by means of shares in the combined firm, the bidder can share the risk of a downward post-acquisition revaluation of the target's assets (Hansen, 1987).

Fourth, corporate governance concerns of bidding firms are another important determinant of the choice of the payment method. Consistent with Faccio and Masulis (2005), we show that all-cash acquisitions are more likely when a bidding firm is controlled by shareholders with an intermediate level of voting power ranging between 20% and 60%. This evidence supports the control loss hypothesis: the large shareholders of the bidding firm prefer cash over equity as a means of payment if an all-equity bid threatens their control position.

Fifth, the regulatory environment influences the choice of financing sources. Bidders are more likely to use external sources of financing when shareholder protection is high. Similarly, creditor protection is positively related to the use of external financing. Bidders who rely on internally generated funds as a means of financing operate in a corporate governance environment with the lowest creditor and shareholder protection. These conclusions are in line with LaPorta et al. (1998) who argue that better protection of the providers of finance from expropriation by entrepreneurs facilitates the development of well-functioning capital markets and ensures lower costs of financing.

The legal environment is also an important factor that affects the choice of the payment method in domestic and cross-border corporate acquisitions. We show that bidders are more

likely to use equity in a takeover bid in countries with a lower protection of minority shareholder rights. The target firm's shareholders are more likely to accept all-equity offers if the bidder is from countries with better corporate transparency standards and stronger shareholder protection.

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Appendix I. Variable Definitions

Variable	Definition
% ACQUIRED	Percentage of the target firm's shares acquired by the bidder in the transaction: number of shares acquired divided by the total number of shares outstanding. <u>Source:</u> <i>SDC, LexisNexis, Factiva, and Financial Times</i>
(B) MVAL	Market capitalization of the bidding firm 60 days prior to the initial bid announcement. <u>Source:</u> <i>Amadeus and 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. <u>Source:</u> see Appendix II.
1997-1999	Indicator equals one if the bid was initiated in the period between January 1, 1997 and December 31, 1999; equals zero otherwise. <u>Source:</u> <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 ($20\% \leq \text{CONTROL} < 60\%$). <u>Source:</u> see Appendix II.
2000-2001	Indicator equals one if the bid was initiated in the period between January 1, 2000 and December 31, 2001; equals zero otherwise. <u>Source:</u> <i>SDC</i>
AGE	Number of years since the firm was incorporated. <u>Source:</u> <i>Amadeus/Fame/Reach and DataStream</i>
BETA	Equity beta of the bidding firm, estimated using the market model, adjusted for thin-trading and reversion to the mean over the period of 300 to 60 days before the M&A announcement. The market index is the MSCI Europe. <u>Source:</u> computations based on <i>DataStream</i>
BLOCKHDR>20	Indicator equals one if bidding firm is controlled by a blockholder owning a voting stake of more than 20% voting stake ($\text{CONTROL} \geq 20\%$). <u>Source:</u> see Appendix II.
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. <u>Source:</u> <i>Amadeus/Fame/Reach and DataStream</i>
CASH FIN	Indicator equals one if cash payment is fully financed with cash, and equals zero otherwise <u>Source:</u> <i>LexisNexis, Factiva, and Financial Times</i>
CASH PMT	Indicator equals one if the acquisition is fully paid with cash, and equals zero otherwise <u>Source:</u> <i>SDC, LexisNexis, Factiva, and Financial Times</i>
CBORDER BID	Indicator equals one if the bidder and target are from different countries, and equals zero otherwise. <u>Source:</u> <i>SDC and LexisNexis, Factiva, and Financial Times</i>
CFLOW/SALES	Ratio of total cash flow (including cash flow from operating, financial, and investment activities) to sale revenues, at the year-end prior to the deal announcement. <u>Source:</u> <i>SDC and Amadeus/Fame/Reach and DataStream</i>
CFLOW/TRVAL	Ratio of the bidder's total cash flow (including cash flow from operating, financial, and investment activities) over the price paid for the acquisition (excluding assumed liabilities). Cash flow is at the year-end prior to the deal announcement. <u>Source:</u> <i>SDC and Amadeus/Fame/Reach and DataStream</i>
CHLDG/TRVAL	Ratio of the bidder's cash holdings (cash and cash equivalents in place) over the price paid for the acquisition (excluding assumed liabilities). Cash and cash equivalents are at the year end prior to the deal announcement <u>Source:</u> <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. <u>Source:</u> computed based on <i>Amadeus/Fame/Reach and DataStream</i>
CONTROL LOSS (%)	Target's largest controlling share block multiplied by RELVAL. The target's controlling share block is assumed 100% if the target is unlisted. <u>Source:</u> <i>SDC and Amadeus/Fame/Reach and sources reported in Appendix II.</i>
CONTROL(%)	Ultimate voting stake owned by the bidder's largest shareholder. <u>Source:</u> see Appendix II.
CONTROL<20	Indicator equals one if bidding firm is widely-held; there is no shareholder owning 20% or more of the voting rights ($\text{CONTROL} < 20\%$). <u>Source:</u> see Appendix II.
CONTROL>60	Indicator equals one if bidding firm is controlled by a large blockholder owning more than 60% of the voting rights ($\text{CONTROL} \geq 60\%$). <u>Source:</u> see Appendix II.
CORRUPT	Corruption index: it includes measures 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 governance outcomes. <u>Source:</u> <i>The World Bank</i>

Variable	Definition
CREDITOR PRT	Creditor rights protection index. The index ranges between 0 and 5, with higher values corresponding to better governance outcomes. The details about the calculation of the creditor rights index are given in Appendix III. <u>Source</u> : own computations
DEBT FIN	Indicator equals one if a debt issue is used to raise cash, and equals zero otherwise <u>Source</u> : <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 <u>Source</u> : <i>LexisNexis, Factiva, and Financial Times</i>
ENGLISH	Indicator equals one if the firm is incorporated in a country of English legal origin (Ireland Rep. or the UK), and equals zero otherwise. <u>Source</u> : constructed based on <i>LaPorta et al. (1997)</i> classification
FIN LEVERAGE	Bidding firm's debt prior to the M&A announcement plus deal value, all divided by the sum of the bidding firm's total assets prior to the M&A announcement and the deal value. <u>Source</u> : computed based on <i>Amadeus/Fame/Reach and DataStream</i>
HOSTILE BID	Indicator equals one if the bid is hostile, unsolicited, or a competing bid is made (except for the ones in which the bidder was a white knight). <u>Source</u> : <i>SDC, LexisNexis, Factiva, and Financial Times</i>
INTRA-IND BID	Indicator equals one if the bidder and target operate in the same industry (primary 3-digit SIC code coincides), and equals zero otherwise. <u>Source</u> : <i>SDC and Amadeus/Fame/Reach</i>
INVESTM	Ratio of total investments to total assets, both are at the year-end prior to deal announcement. <u>Source</u> : <i>Amadeus/Fame/Reach and DataStream</i>
LEV	Ratio of total debt to total assets at the year-end prior to the deal announcement. <u>Source</u> : computed based on <i>Amadeus/Fame/Reach and DataStream</i>
LISTED TARGET	Indicator equals zero if target firm is not listed on any stock exchange at the moment of bid announcement, and is one otherwise. <u>Source</u> : <i>SDC and Amadeus/Fame/Reach</i>
M&A 100%	Indicator equals one if the bidder owns 100% of share capital of the target firm after the deal completion, and equals zero otherwise. <u>Source</u> : <i>SDC, LexisNexis, Factiva, and Financial Times</i>
MINORITY PRT	Minority shareholder rights protection index. The index ranges between 0 and 25, with higher values corresponding to better governance outcomes. For the constituting elements of the index and their coding: see Appendix III. <u>Source</u> : own computations
MIX PMT	Indicator equals one if the acquisition is paid with a combination of cash and equity, and equals zero otherwise. <u>Source</u> : <i>SDC, LexisNexis, Factiva, and Financial Times</i>
MVAL 2YGR (%)	Average annually compounded market value growth rate over the two-year period preceding the year of analysis. <u>Source</u> : <i>Amadeus/Fame/Reach and DataStream</i>
PRIV TRG	Indicator equals one if target firm is a stand-alone firm not listed on any stock exchange at the moment of bid announcement, and is zero otherwise. <u>Source</u> : <i>SDC and Amadeus/Fame/Reach</i>
Q-RATIO	Bidder's ratio of the market value of equity (ordinary and preferred) plus book value of debt over the sum of book value of equity and book value of debt. The market value of equity is taken 60 days prior to deal announcement, book value of equity and debt are as of the year-end prior to deal announcement. <u>Source</u> : <i>Amadeus/Fame/Reach and DataStream</i>
RELVAL (%)	The ratio of the TRVAL over the sum of the TRVAL plus the bidder's market capitalization. <u>Source</u> : <i>SDC, LexisNexis, Factiva, and Financial Times and Amadeus/Fame/Reach and DataStream</i>
ROA	Ratio of net income to total assets, both are at the year-end prior to deal announcement. <u>Source</u> : <i>Amadeus/Fame/Reach and DataStream</i>
ROE	Ratio of net income to book value of equity, both are at the year-end prior to deal announcement. <u>Source</u> : <i>Amadeus/Fame/Reach and DataStream</i>
RULE OF LAW (RULAW)	Rule of Law index: it includes several 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 better governance outcomes. <u>Source</u> : <i>The World Bank</i>
RUNUP (%)	Cumulative abnormal returns (CARs) of the bidder over the window [-60, -20] preceding the 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 the parameters are estimated over 240 days starting 300 days prior to the acquisition announcement. <u>Source</u> : computations based on <i>DataStream</i>
SALES	Ratio of sales revenues to total assets; both are as of as of the year-end prior to deal announcement. <u>Source</u> : <i>Amadeus/Fame/Reach and DataStream</i>
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 deal announcement. <u>Source</u> : <i>Amadeus/Fame/Reach and DataStream</i>

Variable	Definition
SHAREHDR PRT	Shareholder rights protection index. The index ranges between 0 and 25, with higher values corresponding to better governance outcomes. For the constituting elements of the index and their coding: see Appendix III. <u>Source</u> : own computations
EQUITY FIN	Indicator equals one if equity issue is used to raise cash, and equals zero otherwise <u>Source</u> : <i>LexisNexis, Factiva, and Financial Times</i>
EQUITY PMT	Indicator equals one if the acquisition is fully paid with equity, and equals zero otherwise <u>Source</u> : <i>SDC, LexisNexis, Factiva, and Financial Times</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. <u>Source</u> : <i>Amadeus/Fame/Reach and DataStream</i>
TAX LIAB	Variable that takes the value of the tax liabilities of the combined firm: sum of the bidder's and target's taxes payable scaled by the sum of their total assets. All measures are at the year-end prior to the deal announcement. <u>Source</u> : computed based on <i>Amadeus/Fame/Reach and DataStream</i>
TEND OFFER	Indicator equals one if a tender offer unopposed by the target's board of directors takes place, and is zero otherwise. <u>Source</u> : <i>SDC and LexisNexis, Factiva, and 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 dependent variable is a dummy equal to 1 if a firm was acquired during the sample period and 0 otherwise. The estimates of the probit model are reported in Appendix VI. <u>Source</u> : computed based on <i>Amadeus/Fame/Reach, DataStream, SDC, LexisNexis, Factiva, Financial Times, Faccio and Lang (2002) and Martynova and Renneboog (2006)</i> .
TOEHOLD	Percentage of the target firm's shares that the bidder had accumulated prior to the bid announcement. <u>Source</u> : <i>SDC, LexisNexis, Factiva, and Financial Times</i>
TRANSPARENCY	Transparency index. The index ranges between 0 and 10, with higher values corresponding to better governance outcomes. For the coding of the constituting elements of the index: see Appendix III. <u>Source</u> : own computations
TRVAL (m US\$)	Price paid for the acquisition (excluding assumed liabilities). <u>Source</u> : <i>SDC, LexisNexis, Factiva, and Financial Times</i>

Appendix II. Sources of ownership data

We collect ownership data for bidding and target firms from our sample with the help of researchers who have worked with ownership data for companies from their country. The names of the researchers are presented in the table below. These data are complemented with data from other sources such as annual reports and the shareholder register of national stock exchanges. Finally, for some companies, The Faccio and Lang (2002) ownership database was used.

<i>Country</i>	<i>Data source</i>
Austria	Prof. Dr. Klaus Gugler (<i>University of Vienna</i>); Faccio and Lang (2002)
Belgium	Prof. Dr. Christoph van der Elst (<i>Tilburg University</i>); Prof. Dr. Luc Renneboog (<i>Tilburg University</i>)
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>); Faccio and Lang (2002)
Germany	Prof. Dr. Luc Renneboog (<i>Tilburg University</i>); Prof. Dr. Ekkehart Boehmer (<i>Texas A&M University</i>); Faccio and Lang (2002)
Ireland	Thomson Financial Research: annual reports of individual firms; Faccio and Lang (2002)
Italy	Prof. Dr. Marcello Bianchi (<i>CONSOB</i>)
Latvia	Riga Stock Exchange (http://www.rfb.lv); Dr. Anete.Pajuste (<i>Riga Business School</i>)
Lithuania	Vilnius Stock Exchange (http://www.nse.lt)
Netherlands	Financieele Dagblad, and annual reports
Norway	Prof. Dr. Bernt Arne Odegaard (<i>Norwegian School of Management</i>)
Poland	Dr. Grzegorz Trojanowski (<i>University of Exeter</i>)
Portugal	Prof. Dr. Carlos Ferreira Alves (<i>Porto University</i>); Mr. Pedro Verga Matos (<i>Universidade Técnica de Lisboa</i>); CMVM - Comissão do Mercado de Valores Mobiliários (www.cmvm.pt)
Romania	Bucharest Stock Exchange (http://www.bvb.ro)
Slovenia	Dr. Aleksandra Gregoric (<i>Ljubljana University</i>)
Spain	Prof. Dr. Rafael Crespí (<i>Universitat de les Illes Balears</i>); CNMV- Comisión Nacional del Mercado de Valores (http://www.cnmv.es)
Sweden	Prof. Dr. Martin Holmen (<i>Uppsala University</i>)
Switzerland	Dr. Markus Schmid (<i>University of Basel</i>); Mr. Diego Dimitri Liechti (<i>Universität Bern</i>); data source Swiss Stock Guide (<i>Schweizer Aktienfuehrer</i>)
UK	Dr. Grzegorz Trojanowski (<i>University of Exeter</i>); Faccio and Lang (2002); Thomson Financial Research: annual reports of individual firms

Appendix III. The coding system of the constituting elements of the legal environment indices

This appendix shows how specific regulations are quantified to construct four indices: the shareholder rights protection index, the creditor rights protection index, the transparency index, and the minority shareholders protection index. Some regulatory aspects are incorporated in several indices.

1. The shareholder rights protection index (Max=25) is a general index which reflects shareholders ability to mitigate managerial opportunistic behavior. The index is constructed by combining the following 3 sub-indices:

1.1 The appointment rights index: The appointment rights index is based on the rules to appoint and replace executive and non-executive directors. It measures the degree of alignment of the interests of management and shareholders. The following regulatory provisions are quantified as follows:

- Employee representation: 0 if required, 2 if not.
- Nomination to the board by shareholders: 2 if required, 0 if not.
- Tenure on the board: 0 if more than 4 years, 1 if 4 years, 2 if less than 4 years
- Cross-shareholdings:
 - Cross-shareholdings between 2 independent companies: 1 if regulated, 0 if not.
 - Maximum shareholding of a subsidiary in its parent company: 1 if regulated, 0 if not
- Election rules:
 - Proxy voting by mail: 2 if allowed, 0 if not
 - Requirement to Deposit/Register shares prior to a general meeting:
 - ⇒ Bearer shares: 0 if deposit is required, 1 if only registration of shares is required, 2 if none is required
 - ⇒ Nominal shares: 0 if deposit is required, 2 if deposit requirement is forbidden

1.2 The decision rights index: The decision rights index is based on shareholder ability to mitigate managerial discretion. The decision rights index cover regulatory provisions that mandate direct shareholder decision-making. The following regulatory provisions are quantified as follows:

- Shareholders approval of anti-takeover defense measures: 2 if required, 0 if not.
- Shareholders approval of preemption rights: 2 if required, 0 if not.
- Percentage needed to call for extraordinary meeting: 0 if no rule or more than 20%, 1 if 20% or less but more than 5%, 2 if 5% and less.
- Voting caps: 0 if allowed, 2 if not.

1.3 The trusteeship index: The trusteeship index is based on the efficiency of the board of directors in monitoring the actions of CEOs. The following regulatory provisions are quantified as follows:

- Board independence:
 - 2 if CEO cannot be the chairman of the board of directors (in 1-tier board structure), 0 otherwise
 - 2 if the overlap between management and supervisory board is forbidden (in 2-tier board structure), 0 otherwise
- Employee representation: 0 if required, 2 if not.
- Separate board of auditors: 1 if required, 0 otherwise

2. The transparency index (Max=10): The transparency index is based on the quality of information about company, its ownership structure, and management available to investors. The following regulatory provisions are quantified in this index:

- Requirement to disclose managerial compensation: 0 if not required, 1 if required on aggregate basis, 2 if required on individual basis.
- Requirement to disclose any transactions between management and company: 2 if required, 0 if not
- Mandatory disclosure of large ownership stakes: 0 if disclosure is not required or the min percent is 25% or more; 1 if 10% or more (less than 25%); 2 if 5% or more (less than 10%); 3 if less than 5%.
- Frequency of financial reports: 0 if once per year, 1 if twice per year, 2 if more than twice per year
- Comply or explain rule: 1 if the requirement is present, 0 otherwise

3. The creditor rights protection index (Max=5): The index is based on regulatory provisions that allow creditors to force repayment more easily, take possession of collateral, or gain control over firm in financial distress. The following regulatory provisions are quantified as follows:

- Debtor-oriented versus Creditor-oriented code: 1 if no reorganization option (liquidation only); 0 if reorganization + liquidation option
- Automatic stay on the assets: 1 if automatic stay is obliged in reorganization (if debt-orient code) or liquidation procedure (if liquidation code); 0 if no automatic stay
- Secured creditors are ranked first: 1 if secured creditors are ranked first in the reorganization procedure (if debtor-oriented code) or liquidation procedure (if liquidation code); 0 if government and employees are ranked first.
- Creditor approval of bankruptcy: 1 if creditor approval is required to initiate reorganization procedure (if debtor-oriented code) or liquidation procedure (if liquidation code); 0 otherwise
- Appointment of official to manage reorganization/liquidation procedure: 1 if it is required by law in a reorganization procedure (if debtor-oriented code) or a liquidation procedure (if liquidation code); 0 otherwise

4. The minority shareholders protection index (Max= 25): The index is based on regulatory provisions aimed at increasing the relative power of the minority shareholders in a context of strong majority shareholders. The index is constructed by combining the following 4 sub-indices:

4.1 Minority shareholders appointment rights index. The index is based on associated with appointment rights that can be used to protect minority shareholders. These include rights to reserve seats on the board of directors for minority shareholders or to limit voting power of large shareholders. The following regulatory provisions are quantified as follows:

- Minority representation on the board: 2 if required, 0 otherwise
- Voting caps limiting power of large shareholders: 1 if voting caps are allowed, 0 if not
- One-share-one-vote rule: 0 if both multiple voting rights and non-voting shares are allowed; 1 if one of the two is allowed; 2 if none is allowed

4.2 Minority shareholders decision rights index. The index is associated with the ability of minority shareholders to affect fundamental corporate transactions that require a shareholder vote. The following regulatory provisions are quantified as follows:

- Supermajority requirement for approval of major company's decisions: 0 if 50% or less; 1 if more than 50% but less than 75%; 2 if 75% or more
- Percentage needed to call for extraordinary meeting: 0 if the rule is not present or required percentage is 20% or more; 1 if the required percentage is between 20 and 5%; 2 if the percentage is 5% or less.

4.3 The board independence (from the controlling shareholder) index. The index indicates the extent to which the board of directors serves as a trustee for minority shareholder, i.e. the directors are independent from the firm's controlling shareholders. The following regulatory provisions are quantified as follows:

- Nomination to the board by shareholders: 2 if shareholders voting to elect non-executive directors is not required (2-tier boards); 0 if required or 1-tier board
- Board independence: 2 if CEO cannot be the chairman of the board of directors (in 1-tier board structure) or if the overlap between management and supervisory board is forbidden (in 2-tier board structure), 0 otherwise

4.4 Minority shareholders reward and affiliation rights index. The index groups together the remaining regulatory provisions aimed at protecting minority shareholders: a norm of equal treatment (or shared returns) and rights for entry and exit on fair terms. The following regulatory provisions are quantified as follows:

- Equal treatment rule: 2 if required, 0 if not
- Mandatory disclosure of large ownership stakes: 0 if disclosure is not required or the minimum percent is 25% or more; 1 if 10% or more (less than 25%); 2 if 5% or more (less than 10%); 3 if less than 5%.
- Mandatory bid rule: 0 if not required; 1 if 50% or control; 2 if between 50 and 30%; 3 if 30% or less.
- Sell-out rule: The squeeze-out rule is used as a proxy for the sell-out rule, (assumption: sell-out is always in place if squeeze-out is adopted, with the same terms as squeeze-out): 0 if no squeeze-out; 1 if squeeze-out at 95% or more; 2 if squeeze-out at 90% or less.
- Minority claim: 0 if no; 1 if 10% or more; 2 if 5% or more; 3 if less than 5%.
- Break-through rule: 1 if required; 0 if not

Appendix VI. Probit model predicting targets of European corporate takeovers

Table reports Probit models used to predict likelihood of a public firm to become a target of a corporate takeover during 1993-2001. Models are estimated for a sample of all European firms and for two sub-samples of UK and Continental European (CE) firms. Variable definitions are given in Appendix I. For each firm-year observation, dependent variable equals 1 if a firm is a target of a takeover bid in this year (target firm in our sample); and equals zero if, for the same year, a firm has not been recorded by SDC as a target in M&As involving changes in control. Sample of firms that have not participated in M&As is from DataStream. a/b/c - statistical significance at 1%/5%/10%, respectively.

Variables	All firms (1)		UK firms (2)		CE firms (3)	
	Coefficient	Pr > χ^2	Coefficient	Pr > χ^2	Coefficient	Pr > χ^2
MVAL (log)	-0.19^a	.000	-0.16^a	.000	-0.23^a	.000
Q-RATIO	-0.00	.921	-0.08	.330	0.08	.396
COLLATERAL	1.49^a	.002	1.50^b	.017	1.39^c	.061
LEVERAGE	1.53^a	.004	1.44^b	.038	0.47	.769
LEVERAGE^2	-1.03	.101	-1.17	.181	1.29	.620
CFLOW/SALES	0.72^a	.003	0.81	.126	0.92^a	.005
MVAL 2YGR (%)	-0.13^a	.000	-0.11^a	.001	-0.20^a	.010
1997-1999	0.58^a	.000	0.50^a	.000	0.78^a	.000
2000-2001	0.23^c	.078	0.11	.497	0.43^c	.055
ENGLISH	-0.20^b	.049				
INTERCEPT	-1.04^b	.044	-1.27^c	.061	-0.79	.362
No obs.	8434		5254		3180	
No of targets	788		393		395	
Likelihood ratio	1255.88	.000	698.16	.000	538.56	.000

Table 1. Sample composition by bidder's nation and by mode of payment

	Total Sample	AUS	BEL	DEN	FIN	FRA	GER	IRE	ITA	LUX	NL	NOR	POR	ESP	SWE	SWZ	UK	OTH*
Panel A: Payment structure and sources of transaction financing (bidder's nation classification)																		
All-Cash bids:	854	9	12	22	25	94	52	14	34	2	15	25	1	27	38	20	442	22
▪ Internal financing	590	9	12	18	22	81	44	9	30	2	9	23	1	24	33	14	238	21
▪ Debt financing	173	0	0	3	0	7	6	2	3	0	5	0	0	2	1	6	138	0
▪ Debt/Stock financing	42	0	0	0	0	2	1	3	1	0	1	0	0	1	1	0	32	0
▪ Stock financing	49	0	0	1	3	4	1	0	0	0	0	2	0	0	3	0	34	1
Cash/Stock bids:	259	1	1	1	2	7	4	3	1	0	1	3	0	2	6	2	225	0
▪ Internal financing	162	1	1	1	1	5	3	2	1	0	1	2	0	1	5	2	136	0
▪ Debt financing	97	0	0	0	1	2	1	1	0	0	0	1	0	1	1	0	89	0
All-Stock bids	248	3	5	4	8	29	16	3	3	0	1	11	0	5	18	4	134	4
Total sample	1361	13	18	27	35	130	72	20	38	2	17	39	1	34	62	26	801	26
Panel B: Undisclosed payment method																		
Domestic bids	332	5	10	6	26	91	116	0	7	0	0	7	0	6	24	9	0	25
Cross-border bids, Bidders	243	17	15	13	10	55	50	5	6	3	1	7	1	0	30	16	10	4
Cross-border bids, Targets	243	10	4	3	10	20	42	0	19	1	15	5	4	13	11	12	0	74
Total sample, Bidders	575	22	25	18	36	146	166	5	13	3	1	14	1	6	54	25	10	29
Total sample, Targets	575	15	14	9	36	111	158	0	26	1	15	12	4	18	35	21	0	99

OTH* = BUL, CRO, CZR, CYP, EST, HUN, LAT, LIT, ROM, SLO

Table 2. Average values of variables hypothesized to affect the choice of sources of financing in corporate acquisitions

The χ^2 -statistic in column (7) tests the null hypothesis of no differences between the mean values for cash-, debt-, debt and equity-, and equity-financed acquisitions that are entirely paid with cash. Similarly, the χ^2 -statistic in column (11) tests the null hypothesis of no differences between the mean values for cash- and debt- financed acquisitions paid with a combination of cash and equity. The χ^2 -statistics in column (13) tests the null hypothesis of no differences between the mean values for all-cash, mixed (cash and equity), and all-equity paid acquisitions. RUNUP is the CARs of the bidding firm over the window [-60, -20] prior to the takeover announcement. To assess the significance of the CAARs we perform a non-parametric test (Corrado, 1989); a/b/c indicate statistical significance of the CAARs at 1%/5%/10%, respectively.

Variables	Whole Sample [#]	All-Cash Payment:						Mixed (Cash & Stock) Payment				All-Stock Payment	χ^2 -stat	Undisclosed Payment Structure
		All Fin	Cash Fin	Debt Fin	Debt/Stock Fin	Stock Fin	χ^2 -stat	All Fin	Cash Fin	Debt Fin	χ^2 -stat			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
A1. Pecking order hypothesis														
CFLOW/TRVAL	0.96	1.86	2.71	0.21	0.21	0.52	18.1	0.66	0.81	0.27	16.5	0.14	21.0	na
CHLDG/TRVAL	0.80	1.57	2.81	0.59	0.09	0.67	14.0	0.49	0.61	0.20	9.8	0.16	17.3	na
FIN LEVERAGE	0.34	0.30	0.26	0.32	0.47	0.34	4.2	0.37	0.35	0.42	2.8	0.46	4.7	na
COLLATERAL	0.33	0.34	0.32	0.34	0.43	0.35	2.7	0.32	0.32	0.31	1.3	0.35	1.8	0.32
A2. Market-timing hypothesis and B3. Stock misvaluation hypothesis														
RUNUP (%)	0.90	0.68	0.30	0.92 ^b	1.41 ^a	2.80 ^a	8.2	1.80 ^a	1.82 ^a	1.78 ^a	4.0	2.89 ^a	11.1	-2.03 ^a
A3. Agency costs of equity hypothesis														
CONTROL (%)	29.9	33.8	35.3	23.6	17.4	30.0	4.6	20.7	23.6	19.5	5.7	28.4	8.4	39.5
BLOCKHDR>20	0.55	0.63	0.67	0.39	0.23	0.67	7.6	0.34	0.35	0.34	3.5	0.52	8.7	0.76
A4. Takeover threat hypothesis														
TO THREAT	0.06	0.05	0.05	0.02	0.08	0.06	5.6	0.08	0.10	0.04	3.2	0.11	5.2	0.04
A5. Debt overhang hypothesis														
Q-RATIO	1.81	1.64	1.61	2.00	1.64	2.65	5.7	2.03	2.54	1.57	6.0	2.01	6.3	1.53
CAPX 3YGR (%)	8.5	6.3	8.5	4.4	3.8	33.1	14.3	17.4	19.5	14.4	7.8	34.7	24.6	21.3
SALES 3YGR (%)	24.2	22.0	21.8	24.3	20.2	25.2	7.6	30.7	39.3	25.6	15.6	27.3	13.8	39.2
TA 3YGR (%)	26.8	22.9	22.2	20.7	30.9	34.3	9.4	31.8	38.6	18.0	14.1	49.4	16.8	41.3
A6. Agency cost of debt and A7. Financial flexibility hypotheses														
BETA	0.64	0.64	0.64	0.65	0.39	0.69	4.1	0.58	0.58	0.60	3.6	0.73	4.2	0.66
AGE	16.1	21.4	23.5	20.1	8.4	5.3	9.1	13.4	18.0	10.7	12.4	3.6	11.0	4.5
A8. Debt tax shield hypothesis														
TAX LIAB	0.026	0.028	0.026	0.027	0.040	0.033	2.2	0.027	0.028	0.026	1.4	0.019	2.4	0.024
A9. Financiers protection hypothesis														
CREDITOR PRT	2.8	2.8	2.7	3.0	2.9	2.8	5.9	3.0	2.9	3.0	4.3	2.9	5.3	2.5
CR PRT x RULAW	12.2	11.9	11.5	13.1	12.6	12.4	6.1	13.0	13.0	13.1	1.1	13.1	7.4	10.8
SHAREHDR PRT	15.0	14.5	13.6	16.7	16.6	15.5	8.8	17.1	16.8	17.4	5.7	15.4	8.7	10.4
SH PRT x RULAW	65.1	62.7	58.3	73.7	72.6	67.9	12.0	75.2	74.2	77.0	6.1	72.8	10.6	44.4
Number of obs.	1361	854	590	173	42	49		259	162	97		248		575

Whole Sample[#] = Bids with undisclosed payment structure are not included

Table 3. Average values of variables hypothesized to affect the payment method in corporate acquisitions

The χ^2 -statistic in column (7) tests the null hypothesis of no differences between the mean values for cash-, debt-, debt and equity-, and equity-financed acquisitions that are entirely paid with cash. Similarly, the χ^2 -statistic in column (11) tests the null hypothesis of no differences between the mean values for cash- and debt- financed acquisitions paid with a combination of cash and equity. The χ^2 -statistics in column (13) tests the null hypothesis of no differences between the mean values for all-cash, mixed (cash and equity), and all-equity paid acquisitions.

Variables	Whole Sample [#]	All-Cash Payment:						Mixed (Cash/Stock) Payment				All-Stock Payment	χ^2 -stat	Undisclosed Payment Structure
		All Fin	Cash Fin	Debt Fin	Debt/Stock Fin	Stock Fin	χ^2 -stat	All Fin	Cash Fin	Debt Fin	χ^2 -stat			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
B1. Risk sharing hypothesis														
(B) MVAL (m US\$)	2,249	2,533	1,952	4,400	1,172	1,385	16.9	673	513	761	4.9	3,913	14.0	2,023
TRVAL (m US\$)	603	209	114	433	1,106	139	22.2	329	193	568	7.4	2,290	21.7	na
RELVAL (%)	19.54	14.27	11.34	17.74	31.26	18.80	34.1	21.61	19.9	31.29	8.0	32.94	26.6	na
B2. Control loss hypothesis														
CONTROL LOSS (%)	10.6	7.4	6.7	8.9	19.8	11.3	5.4	13.9	10.9	20.6	8.1	16.2	8.7	na
CONTROL<20	0.45	0.37	0.34	0.60	0.77	0.33	7.8	0.64	0.64	0.65	3.7	0.49	8.6	0.24
20<CONTROL<60	0.43	0.49	0.52	0.31	0.15	0.50	9.4	0.32	0.32	0.35	2.4	0.39	10.3	0.53
CONTROL>60	0.12	0.14	0.14	0.09	0.08	0.17	6.1	0.03	0.04	0.00	9.1	0.12	7.9	0.23
(T) BLOCKHDR>20	0.90	0.88	0.94	0.70	0.78	0.97	7.1	0.94	0.95	0.89	5.4	0.85	6.4	0.98
B4. Transaction specifics hypothesis														
CBORDER BID	0.25	0.32	0.36	0.23	0.26	0.26	9.7	0.12	0.17	0.03	8.9	0.19	11.7	0.42
TEND OFFER	0.32	0.33	0.23	0.58	0.60	0.34	11.4	0.27	0.24	0.32	9.6	0.39	9.4	0.00
HOSTILE BID	0.05	0.06	0.05	0.10	0.14	0.04	13.2	0.04	0.03	0.07	7.1	0.04	6.8	0.00
LISTED TARGET	0.43	0.44	0.38	0.61	0.57	0.38	13.6	0.28	0.28	0.29	1.5	0.59	15.1	0.10
INTRA-IND BID	0.65	0.67	0.65	0.69	0.73	0.65	1.5	0.58	0.60	0.54	2.8	0.67	1.7	0.61
B5. Legal regulation hypothesis														
MINORITY PRT	14.6	14.4	14.3	14.6	14.7	13.8	4.9	14.7	14.6	14.8	7.1	13.5	10.6	11.7
MIN PRT x RULAW	61.7	60.9	60.2	64.2	61.0	59.1	7.1	64.5	64.0	65.4	5.3	58.3	8.2	49.6
TRANSPARENCY	6.8	6.6	6.2	7.6	7.4	6.9	5.6	7.7	7.5	8.0	4.3	6.5	6.1	5.0
TRANSP x RULAW	29.4	28.4	26.4	33.5	32.5	30.0	10.4	34.0	33.2	35.4	7.5	28.4	9.6	21.2
CORRUPTION	4.4	4.4	4.3	4.5	4.4	4.4	3.8	4.5	4.5	4.6	1.3	4.4	2.2	4.3
RULE OF LAW	4.3	4.3	4.2	4.4	4.3	4.4	3.6	4.4	4.4	4.4	0.9	4.3	2.4	4.3
Number of obs.	1361	854	590	173	42	49		259	162	97		248		575

Table 4. Multinomial logit model predicting bidder's payment/financing choice

The table reports a multinomial logit model that describes the bidder's choice of the payment/financing method in corporate takeovers. Six possible choices are considered: (i) cash payment/cash financing; (ii) cash payment/debt financing; (iii) cash payment/equity financing; (iv) mixed payment/cash financing; (v) mixed payment/debt financing; and (vi) equity payment. The multinomial logit model includes five binary logit models. Each binary logit predicts a probability of choosing one of the first five alternatives relative to the probability of choosing the benchmark, which is an equity payment. A Wald test is used to test for significance of the estimated coefficients; the p-value of the Wald Chi-square statistic is reported ($\text{Pr} > \chi^2$). 'Test for IIA' reports the Chi-square statistic of the Hausman specification test for the violation of the IIA assumption. Sample is 1361 acquisitions. a/b/c - statistical significance at 1%/5%/10%, respectively.

Variable	Cash P/Cash Fin (vs. Equity Pmt) (1)		Cash P/Debt Fin (vs. Equity Pmt) (2)		Cash P/Stock Fin (vs. Equity Pmt) (3)		Mix P/Cash Fin (vs. Equity Pmt) (4)		Mix P/Debt Fin (vs. Equity Pmt) (5)		
	Coeff.	Pr > χ^2	Coeff.	Pr > χ^2	Coeff.	Pr > χ^2	Coeff.	Pr > χ^2	Coeff.	Pr > χ^2	
INTERCEPT	3.88^a	.000	-10.56^b	.032	2.96	.213	-4.34	.237	-11.38^c	.078	
RUNUP	-1.36^b	.036	-0.76	.308	-0.02	.962	0.61	.422	-1.33^b	.022	
TO THREAT	-1.78	.167	-2.18	.443	1.19	.647	2.79	.132	-3.28^c	.095	
1997-1999	0.34	.286	-0.20	.813	-0.21	.137	-0.40	.357	-0.15	.862	
2000-2001	-0.13	.545	-0.54	.556	-1.07^b	.038	-0.57	.535	-0.07	.901	
TRANSP x RULAW	-0.02	.438	-0.06	.212	0.07	.206	-0.05	.417	-0.02	.233	
MIN PRT x RULAW	0.17	.653	0.21^b	.037	-0.09^b	.033	0.18^b	.047	0.15^c	.096	
SH PRT x RULAW	-0.06^b	.038	-0.05	.435	0.04	.314	-0.08	.117	-0.02	.886	
CR PRT x RULAW	-0.09^b	.019	0.15^b	.042	-0.19	.132	0.39	.154	0.22	.451	
BETA	-0.34	.405	-0.25	.739	-0.23	.293	-0.42	.618	-0.46	.637	
AGE	0.14	.118	0.07	.564	0.02	.729	0.10	.218	0.06	.487	
CFLOW/TRVAL	0.09^a	.008	-0.05	.207	-0.06	.275	-0.06^c	.057	-0.14^c	.059	
FIN LEVERAGE	1.53	.392	-1.32^b	.020	-1.17	.591	1.26	.905	-0.97	.205	
COLLATERAL	0.36	.828	0.02	.392	-0.80	.452	-0.53	.433	1.28	.507	
Q-RATIO	0.03	.492	-0.01	.225	-0.08	.430	0.17^b	.025	-0.02	.685	
MVAL (log)	-0.16	.179	0.19	.120	0.17	.364	-0.24^c	.061	0.34^b	.050	
CONTROL LOSS	0.05	.181	-0.06	.311	0.02	.447	0.14	.148	-0.11	.160	
20<CONTROL<60	0.80^b	.031	0.73	.510	-0.82	.590	0.59	.418	0.42	.952	
CONTROL<20	0.84	.258	0.76	.448	0.53	.646	0.70	.458	0.70	.956	
RELVAL	-3.65^a	.000	-3.53^b	.012	-1.12	.533	-4.74^a	.002	-0.93	.573	
CBORDER BID	0.64^b	.015	0.49	.122	0.87^b	.023	-0.59	.151	-2.38^a	.002	
TEND OFFER	-0.22	.309	0.43	.107	0.50	.291	-0.72	.378	-0.28	.289	
HOSTILE BID	0.46	.117	0.66	.166	0.71	.274	-1.41	.216	-0.30	.737	
LISTED TARGET	-0.66^b	.022	-0.17	.289	-0.75^b	.012	-0.59	.640	-0.85^c	.053	
INTRA-IND BID	-0.20	.332	0.18	.769	-0.02	.946	-0.10^c	.087	-0.03	.874	
<i>Test for IIA</i>											

Table 5. Nested logit model I: the payment-financing choice

This table presents the estimates from a nested logit regression that predicts the unconditional probability of choosing a payment method and, conditional on the payment method choice, the probability of choosing a particular source of financing. The first stage is the decision over the mode of payment. The second stage is the choice of financing sources conditional on the payment method. The Chi-square statistic tests overall model significance and is 3416 (p-value .000). The sample comprises 1,361 acquisitions. a/b/c - statistical significance at 1%/5%/10%, respectively.

Explanatory variables	First stage:				Second stage:					
	Choice of payment method				Choice of a means of financing conditional on payment method					
	Cash Pmt (vs. Equity Pmt)		Mixed Pmt (vs Equity Pmt)		<i>Cash Payment:</i>			<i>Mixed Payment:</i>		
	(1)		(2)		Cash Fin (vs. Equity Fin)		Debt Fin (vs. Equity Fin)		Cash Fin (vs. Debt Fin)	
	Coeff.	Pr > t/	Coeff.	Pr > t/	Coeff.	Pr > t/	Coeff.	Pr > t/	Coeff.	Pr > t/
INTERCEPT	3.11^a	.002	-3.89^b	.028	0.84	.722	-12.69^a	.003	2.72	.529
RUNUP	-0.37^b	.034	-0.47	.169	-1.51^b	.040	0.19	.812	1.34	.121
TO THREAT	-3.42	.246	-0.81	.444	-0.61	.854	-2.59	.378	2.50	.436
1997-1999	-0.33	.196	-0.20	.222	0.64	.107	0.41	.182	-0.24	.629
2000-2001	0.01	.214	-0.14	.196	1.07^c	.093	1.12	.567	-1.12^c	.056
TRANSP x RULAW	-0.05	.166	0.04	.149	-0.04	.527	-0.06	.224	-0.03^c	.079
MIN PRT x RULAW	0.04^b	.036	0.11^b	.045	0.05	.168	0.37^b	.017	0.11	.240
SH PRT x RULAW	-0.01	.257	-0.03^c	.074	-0.06	.235	-0.14	.149	-0.11	.131
CR PRT x RULAW	0.02	.386	0.07	.315	0.12	.446	0.44^c	.061	-0.14	.124
BETA	-0.29^c	.075	-0.07	.622	0.56	.292	1.36^c	.092	-0.27	.613
AGE	0.07	.103	0.04	.194	0.13	.158	0.03	.355	0.01	.770
CFLOW/TRVAL					0.19^a	.002	0.08	.353	0.13^a	.009
FIN LEVERAGE					0.47	.584	-0.86	.570	0.62^b	.043
COLLATERAL					0.55	.502	0.78^c	.078	-1.66	.109
Q-RATIO					-0.03^c	.072	-0.02	.168	0.26^a	.010
MVAL (log)					-0.18^c	.061	0.19	.197	-0.39^b	.019
BLOCKHLDR>20					0.16	.278	0.13	.161	-0.28	.744
CONTROL LOSS	0.04	.199	0.11	.275						
20<CONTROL<60	1.47^b	.048	0.75	.705						
CONTROL<20	0.76^c	.063	-1.96	.349						
RELVAL	-3.35^a	.000	-1.07^c	.053						
CBORDER BID	0.60^b	.015	-0.56	.113						
TEND OFFER	0.03	.974	-0.34	.374						
HOSTILE BID	0.82^c	.061	0.84	.116						
LISTED TARGET	-1.38^a	.007	-0.84^b	.022						
INTRA-IND BID	-0.22	.666	-0.38^b	.034						

Table 6. Nested logit model II: the financing-payment choice

The table presents the estimates from a nested logit regression that predicts the unconditional probability of choosing a source of takeover financing and, conditional on the financing source choice, the probability of choosing a particular mode of payment. The first stage is the decision over the source of M&A financing. The second stage is the choice of payment method conditional on the financing source. The Chi-square statistic tests the overall model significance is 4008 (p-value .000). The sample comprises 1,361 acquisitions. a/b/c - statistical significance at 1%/5%/10%, respectively.

Explanatory variables	<u>First stage:</u>						<u>Second stage:</u>					
	Choice of a means of financing						Choice of payment method conditional on financing sources					
	Cash Fin (vs Equity Fin)		Debt & Equity Fin (vs Equity Fin)		Debt Fin (vs Equity Fin)		<u>Equity Fin:</u>		<u>Debt & Equity Fin:</u>		Cash Pmt (vs. Mixed Pmt)	
	(1)		(2)		(3)		(4)		(5)		(6)	
	Coeff	Pr > t	Coeff	Pr > t	Coeff	Pr > t	Coeff	Pr > t	Coeff	Pr > t	Coeff	Pr > t
INTERCEPT	-0.18	.867	-5.69	.101	-12.02^a	.002	7.69^b	.015	-4.70^a	.002	4.70	.529
RUNUP	-0.09	.124	-0.85	.768	-0.08^c	.069	-0.33	.633	0.54	.411	0.45	.187
TO THREAT	-2.35^c	.072	-2.17	.159	-2.32	.298	-3.63	.427	1.92	.149	2.35	.578
1997-1999	0.29	.396	-0.14	.814	-0.08	.352	-0.21	.416	-0.40	.592	0.18	.838
2000-2001	-0.09	.751	0.47	.348	-0.34	.578	-1.16^b	.034	-0.78	.342	-0.01	.993
TRANSP x RULAW	-0.03	.221	0.04^c	.078	0.04	.425	0.01	.524	-0.01	.904	-0.03	.821
MIN PRT x RULAW	0.02	.437	0.04	.699	0.20^a	.009	-0.09^a	.008	0.18^b	.042	-0.07	.688
SH PRT x RULAW	-0.06^b	.044	0.04	.384	-0.12^b	.016	0.07	.270	-0.08	.156	0.08	.566
CR PRT x RULAW	0.12	.134	-0.15	.582	0.23^b	.020	0.33	.368	0.23	.363	-0.49	.310
BETA	0.27	.567	-0.09	.544	-0.24	.805	-0.16	.157	-0.38	.496	-1.41^c	.065
AGE	0.16	.651	0.03	.214	0.08	.334	-0.04	.384	0.03	.109	0.03	.742
CFLOW/TRVAL	0.06^a	.003	-0.09^b	.037	-0.01	.877						
FIN LEVERAGE	0.21	.476	-0.42	.138	-0.39^c	.053						
COLLATERAL	0.70	.642	0.82^b	.013	1.63	.317						
Q-RATIO	-0.01	.670	-0.24^a	.007	-0.05	.509						
MVAL (log)	-0.08	.450	0.27^b	.028	0.28^a	.006						
BLOCKHLDR>20	0.59^c	.086	-0.47	.485	-0.17	.780						
CONTROL LOSS							0.57	.429	0.09	.163	0.34	.617
20<CONTROL<60							-1.04	.213	0.70	.408	-1.68	.118
CONTROL<20							-1.41^c	.079	0.59	.474	1.11	.229
RELVAL							-4.06^a	.003	-4.94^a	.002	-1.05^c	.096
CBORDER BID							0.86^b	.014	-0.83	.183	2.51^b	.024
TEND OFFER							0.66^b	.047	0.22	.796	0.76^b	.028
HOSTILE BID							0.15	.873	-1.03	.386	0.42	.254
LISTED TARGET							-0.76^a	.004	-0.92^a	.004	0.56	.669
INTRA-IND BID							-0.15	.579	-0.72^b	.050	0.97^c	.074

Table 7. Probit model predicting bidder's decision to conceal the payment method.

Probit models are used to predict the likelihood of the means of payment is undisclosed in European corporate takeovers during 1993-2001. Models are estimated for a sample of all takeover bids and for two sub-samples of domestic and cross-border bids. Variable definitions are given in Appendix I. The dependent variable equals 1 if the terms of the transaction are unknown; and equals zero if information about payment method has been disclosed. a/b/c - statistical significance at 1%/5%/10%, respectively.

	All bids		Domestic bids		Cross-border bids	
	(1)		(2)		(3)	
	Coeff.	Pr > χ^2	Coeff.	Pr > χ^2	Coeff.	Pr > χ^2
RUNUP	-0.60	.183	-0.14	.632	-0.53	.143
Q-RATIO	-0.01	.360	-0.00	.438	-0.04	.389
CFLOW/SALES	0.03	.418	0.04	.316	0.01	.562
TO THREAT	2.41	.102	2.35	.524	1.93	.410
BLOCKHDR>20	0.56^a	.000	0.60^a	.000	0.44^c	.054
MA 100%	-0.67^a	.000	-0.78^a	.000	-0.47^c	.059
TOEHOLD	0.00	.783	0.00	.629	-0.00	.667
CBORDER BID	0.28	.754				
TEND OFFER or HOSTILE BID	-0.73	.178	-0.72	.169	-0.74	.194
LISTED TARGET	-0.89^a	.000	-1.05^a	.000	-0.71^b	.040
INTRA-IND BID	0.09	.467	0.01	.961	0.27	.237
(B) MIN PRT x RULAW	-0.02^c	.056	-0.02^c	.069	-0.03^b	.036
(B) TRANSP x RULAW	-0.06^b	.015	-0.01	.486	-0.06^b	.011
(B) CR PRT x RULAW	0.08^b	.036	0.11^a	.001	0.07^c	.064
(B) SH PRT x RULAW	-0.06^a	.000	-0.05^a	.000	-0.06^a	.000
(T) MIN PRT x RULAW	0.00	.886			-0.00	.784
(T) TRANSP x RULAW	-0.04	.150			-0.07^b	.023
(T) CR PRT x RULAW	0.03	.568			0.05	.171
(T) SH PRT x RULAW	0.01	.702			-0.01	.558
(T) MIN PRT x RULAW x CB	0.01	.584				
(T) TRANSP x RULAW x CB	-0.06^a	.007				
(T) CR PRT x RULAW x CB	0.03	.677				
(T) SH PRT x RULAW x CB	0.02	.451				
INTERCEPT	1.75^a	.002	1.80^a	.002	1.64^a	.035
Number of obs.	1929		1335		594	
Number of bids with undisclosed information	573		327		246	
Likelihood ratio	972.79	.000	586.18	.000	611.44	.000