

# Corporate control and the choice of investment financing: the case of corporate acquisitions in India

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# **Corporate control and the choice of investment financing: The case of corporate acquisitions in India**

Power, G.J., Rani, N. & Mandal, A.

## **Abstract**

*The market for corporate control offers a rich framework to study the interaction between investment and financing decisions. Do corporations have specific preferences for the means of financing acquisitions, such using cash or equity to pay the claims of the target firm's shareholders? This study builds a unique sample of 1041 corporate acquisitions over the period 2000-2018 in India, a major emerging economy with fast-growing capital markets. The study investigates separately corporate preferences for the means of payment and the financing sources for acquisitions, using multinomial logit and nested logit models. First, we find that different factors explain the payment and financing decisions. Second, the cash payment decision is best explained by the target's relative size, greater tender offers, cross-border deals, and cash reserves. Third, the findings are most aligned with pecking order theory and cost of capital considerations.*

**Keywords:** Cross-border; Tender offer; Tobin's Q; Event Study; Multinomial logit

**JEL codes:** G3; G32; G34

## **1. Introduction**

The market for corporate control, in particular mergers and acquisitions (M&As), is a global phenomenon in the corporate world. It continues to stimulate financial research, especially concerning how investments are financed. M&As indeed offer a rich framework to study the interaction between investment and financing decisions. Do corporations have a strong preference for how they finance investments, especially in case of acquisitions? A large corporate finance literature has focused on how the firm's investment financing and its corporate finance activities are linked. This paper aims to shed new light on the variables that explain the financing strategy for corporate acquisitions and how the acquisition is paid for.

This study builds on a rich literature. Useful surveys of the literature are presented by Andrade, Mitchell and Stafford (2001), Bruner (2004) and recently Renneboog and Vansteenkiste (2019). In particular, Amihud, Lev, and Travlos (1990), Martin (1996), and Ghosh and Ruland (1998) examine variables that explain the payment method in M&A, as well as how buyer management share ownership may affect acquisitions. The seminal study of Myers and Majluf (1984) uses the pecking-order hypothesis to show that the financing decision can be explained by cost of capital considerations and information asymmetry. This literature aims to explain how the irrelevance results of Modigliani and Miller (1958) may not hold in practice. For instance, the financing, investment, and payout policies are not independent. The financing decision therefore can affect firm value through financial frictions including corporate control, risk-bearing, taxes, and cash flow distortions. Further theories that help to explain how acquisitions are financed include market timing (Myers and Majluf, 1984), agency costs (Jensen and Meckling, 1976), laws, courts and regulation (La Porta et al., 1997), takeover threat (Zwiebel, 1996) and potential growth of the acquirer.

Figure 1 describes a range of options including equity financing, debt financing, quasi-equity financing, etc. Acquisitions may be financed via structured and promoter-level leverage. Debt financing can be arranged through bank debt, non-banking financial companies (NBFC) debt, or non-convertible debentures (NCDs).<sup>1</sup> To summarize, the major factors affecting the financing of the acquisition include pecking-order preferences, agency costs, the growth potential of the acquirer, etc. These factors relate to the cost of external capital. The choice of equity versus internal cash or debt financing also depends on the acquirer's strategic preferences with respect to the means of payment. This study investigates the variables that affect the financing decisions of corporate acquisitions in India.

Against this backdrop, this paper provides (to our knowledge) the first empirical evidence on both the payment and financing decisions in the market for corporate acquisitions in India, a major emerging economy with fast-growing capital markets. We examine 1) the valuation effect of acquisitions financed using different modes and payment and 2) different financing sources, and 3) we identify and analyze key variables that explain the financing decisions of corporate acquisitions. Our main findings are as follows. First, we find that different factors explain the payment and financing decisions. Second, the cash payment decision is best explained by the target's relative size, greater tender offers, cross-border deals, and cash reserves. Third, the findings are most aligned with pecking order theory and cost of capital considerations.

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<sup>1</sup> External Commercial Borrowing (ECB) includes foreign loans (term loans, buyers' credit, etc.) made available by approved foreign lenders, with minimum average maturity stipulations. In our empirical setting, Foreign Currency Convertible Bonds (FCCBs) are convertible debentures issued by an Indian company expressed in foreign currency. A non-convertible debenture (NCD) is a debt instrument with a fixed tenure that requires payment at a fixed rate of interest periodically (on a monthly, quarterly, semi-annually or annual basis) and repayment of the principal amount at the end of the tenure.

## **2. Literature Review**

A firm aiming to make a corporate acquisition can pay the claims of the target firm's shareholders either by issuing shares of stock, paying cash (i.e., actual cash, liabilities or newly issued notes), or with a combination of cash and stocks. Prior research has investigated the means of payment in such acquisitions (see e.g., Travlos, 1987; Amihud et al., 1990; Martin, 1996; Ghosh and Ruland, 1998; or Faccio and Masulis, 2005). However, care must be taken to distinguish the sources of financing from the means of payment. For example, a firm may acquire a target with cash, but partially finance this acquisition with external funds. Thus, while a cash-financed acquisition is a pure investment decision, a stock-financed acquisition is not only an investment decision. It is also an equity financing decision, implying capital structure effects (see Rau and Stouraitis, 2011).

M&As tend to occur in empirically documented waves. Why these corporate events are clustered is the subject of significant research, yielding two predominant theories. First, the neoclassical efficiency hypothesis (e.g., Gort, 1969), suggests that managers undertake corporate transactions with efficiency in mind. Their strategies, such as issuing equity or buying targets, aim to foster growth or create economic value (positive NPV). Under this hypothesis, the means of payment for acquisitions is of little consequence. This hypothesis predicts that repurchase waves and stock issuance waves should not occur simultaneously. Second, the misevaluation hypothesis (see Baker, Stein, and Wurgler, 2003, or Shleifer and Vishny, 2003) suggests that rational managers capitalize on irrational market misvaluations by issuing stock in exchange for cash or other firms. This hypothesis predicts that equity issuance waves (both Initial Public Offerings (IPOs) and Seasonal Equity Offerings (SEOs)) and stock-financed acquisitions should happen at the same time, but waves of cash-financed acquisitions and repurchases should not occur simultaneously with waves of equity issuance or stock-financed acquisitions.

Rau and Stroutais (2011) test the two theories by investigating waves of different important corporate events. They find that such waves begin with new issue waves (SEOs preceding IPOs), then stock-financed M&A waves, and finally repurchase waves. Unfortunately, their results are consistent with both theories. They find patterns for stock-financed, but not cash-related, acquisitions. Faccio and Masulis (2005) examine M&As in Europe, in particular the tradeoff between bidder corporate control threats (which disfavor stock financing) and bidder financing limitations (which encourage it). When the bidder has easy access to bank debt because there are interlocking directors, financing the acquisition with cash is more likely. Cash financing is also more likely when the bidder is on the bank's Board of Directors. Stock financing is more likely when the target is under the bidder's control. Stock financing is also less likely when the target is unlisted or a corporate subsidiary, suggesting that bidders and corporate sellers are averse to issuing stock. They conclude that corporate governance and control are highly relevant to explain M&A financing.

According to Martynova and Renneboog (2009), the literature (e.g., Travlos, 1987; Amihud et al., 1990; Martin, 1996; Ghosh and Ruland, 1998; Faccio and Masulis, 2005) does not always make a distinction between the means of payment and the sources of financing for acquisitions, which may be explained by different factors. Indeed, a cash-financed acquisition need not use only internal funds. Martynova and Renneboog therefore focus on the bidder's motives for specific financing methods, rather than means of payment. The bidder considers diversifying against risks of overpayment (Hansen, 1987), corporate control (Faccio and Masulis, 2005) and failure (Fishman, 1989). Their evidence is consistent with cost of capital and corporate governance, but not agency costs, as the main variables explaining specific financing decisions for acquisitions. They find that cash reserves, leverage and debt capacity especially matter, as does the quality of

governance and strength of legal institutions (to enforce debt contracts). Moreover, firms prefer cash financing to equity financing (being averse to changes in corporate control), and the financing decision has a signaling effect on the bidding firm's value. Lastly, internally-funded cash acquisitions underperform debt-financed deals. This suggests investors are wary of cash-financed transactions, as these could be driven by managerial-control motives. Table 1 summarizes the literature on this subject.

Another line of research on M&A financing considers the incentives of managers to exert control over the corporation (Harris and Raviv, 1988; Stulz, 1988). This literature argues that to maintain control, managers may increase debt and use the influx of funds to neutralize the impact of passive investors, thereby reducing the risk of takeovers by corporate raiders. Similar to Modigliani-Miller's (M&M) classic "homemade leverage" argument, Stulz (1988) argues that managers can acquire more equity by borrowing personally. However, if we do not assume frictionless capital markets as in M&M, such a strategy may not be feasible. Clearly, managers have less borrowing capacity than firms do. Managers may therefore prefer to increase control by opting for corporate borrowing. However, Harris and Raviv (1988) point out that increasing debt might lead to higher bankruptcy risk, more stringent loan covenants, and a rise in future cash commitments. Indeed, managers prefer to finance investment by cash or debt rather than issue stocks, to preserve control (Amihud, Lev and Travlos, 1990). This is expected particularly in firms that have a high fraction of managerial ownership. Related empirical literature has found positive cross-sectional correlations between leverage and control (see e.g., Kim and Sorensen, 1986; Agrawal and Mandelker, 1987; Friend and Hasbrouck, 1987; and Friend and Lang, 1988).

According to Myers and Majluf (1984), a cash offer is preferred by managers when the firm is undervalued, but a common stock exchange is preferred if the firm is overvalued. Moreover, equity

offers are preferred to cash offers when target shareholders are better informed about their own firm's undervaluation, pre-acquisition (see Hansen, 1984, 1987). This is because they gain from the post-merger revelation that the firm was undervalued. Travlos (1987) finds a negative effect (negative abnormal returns) from financing a takeover through an exchange of common stock, since this decision signals the bidding firm is overvalued, while cash financing shows a non-negative effect since normal rates of return follow.

Further evidence on capital structure and corporate control is documented by Amihud, Lev and Travlos (1990). They link negative abnormal returns for bidders who use stock financing to lower managerial ownership (in bidding firms). The subsequent literature finds that the poor performance linked to stock financing is not limited to the announcement period. Returns remain low, post-acquisition, for stock-financed transactions relative to cash-financed ones (see Agrawal, Jaffe, and Mandelker, 1992), and the acquirer's operating performance is worse up to five years post-acquisition (Linn and Switzer, 2001).

Martin (1996) claims that mode of acquisition and future investment opportunities are crucial characteristics for an acquisition. As with Fishman (1989), Martin argues that when there is competition for a target firm, bidders prefer to use a cash financed tender offer. Such an offer materializes more quickly, which deters rival bidders. Furthermore, if the acquirer has better investment opportunities, and/or low cash reserves, it will favor stock financing for acquisitions. The mode of acquisition is affected by preferences for control rights for both acquirer and target firm managers, and the latter may well be more influential (Ghosh and Ruland, 1998). When the target firm has a high proportion of managerial ownership, stock financing is more likely. Indeed, target firm managers, through their voting power, negotiate to acquire stock and maintain their



influence in the new organization. Thus, the manager's job retention can play an important role in explaining stock-financed acquisitions.

Recent literature is more sanguine about acquirer gains from M&As, and reports post-M&A improvements in performance and efficiency for firms in several specific contexts (e.g., Blomson, 2015; Betzer et al., 2015; Borodin et al. 2020; Kinatader et al., 2017; Zhang et al., 2018). Tunyi (2021) argues that acquirer returns are greater than previously thought, as prior estimates are downward biased by the effect of highly-anticipated deals. Correcting for deal anticipation reveals typically positive acquirer returns. Dong and Doukas (2021) find that acquirers benefit more when their managers have higher ability, especially in stock-financed acquisitions. Dissanaikie et al. (2021) use a quasi-natural-experiment setting in Europe to show that acquirers enjoy greater returns when the country has stronger takeover laws. The effect is due to lower agency conflicts, improved target selection and lower costs of financing. Cao, Ellis and Li (2019) find that cross-border M&A performance is worse when the acquiring firm's Board of Directors is more internationally diverse. Dahya et al. (2019) exploit the timing of UK Government mandates on board structures to show that acquirers have better returns for listed firms (but not private firms) when the Board of Directors includes more outsiders. Barbopoulos, Adra and Saunders (2020) document that acquirer returns are greater when the M&A is announced on the same day as a major macroeconomic indicator release. The effect is due to greater market attention and benefits smaller M&As in particular. Borodin et al (2020) investigate the impact of 138 M&A deals on the financial performance of US and European firms from 2014 to 2018. Post-M&A performance is measured using return on sales (ROS) and equity-to-enterprise value ratios, adjusting for industry relatedness. Zhang et al (2018) find that value-chain-extending or technology-seeking M&As improve firm performance in China over 2008-2016.

## ***2.1 Determinants of the Financing Decision***

*Cost of Capital Considerations:* The cost of capital is an important explanatory variable in all investing and financing decisions, and in particular, M&As. Cost of capital considerations are reflected in Pecking Order theory and the firm's debt capacity.

*Pecking Order and Free Cash Flow Hypotheses:* According to pecking order theory, acquisitions follow a financing hierarchy, using internal finance first, then debt and outside equity last. Firms that generate large free cash flows or have a greater debt capacity can make acquisitions using cash (Jensen, 1986). Thus, bidders with substantial amounts of cash or a high debt capacity are expected to prefer using cash to pay for takeovers (e.g., Karampatsas et al., 2014).

*Debt Capacity, Financial Conditions, and Market Credit Risk:* To capture debt capacity, the literature suggests using collateral as a proxy variable (Faccio and Masulis, 2005). Collateral is measured as the ratio of property, plant and equipment (PPE) to book value of total assets at the year-end prior to the acquisition announcement (Karampatsas et al., 2014). The empirical evidence does not conclude unambiguously, however, as Faccio and Masulis (2005) find a negative link between leverage and cash, while Harford, Klasan and Walcott (2009) report a positive association between the two.

*Growth Opportunities and Market Timing:* The investment opportunities hypothesis predicts a relationship between the valuation of the acquirer and the mode of acquisition, such that firms with greater growth opportunities prefer using stock to avoid underinvestment problems (Martin, 1996; Jung, Kim and Stulz, 1996). Raising capital through outside equity provides more discretion to managers compared to using debt. Thus, high values of Tobin's Q and market to book ratio make stocks attractive for targets (Faccio and Masulis, 2005; Martin, 1996).

## ***2.2 Determinants of the Acquisition Payment Method***

*Asymmetric Information and Target Status:* Information asymmetry plays a further role in the medium of exchange in acquisitions (Chemmanur, Paeglis and Simonyan, 2009; Eckbo et al., 1990). A bidder that has private information on its own value can use stock when it is overvalued and cash when it is undervalued. Information asymmetry about firm value is lower when a greater number of analysts follow the stock and higher when the size of the target firm increases (Hansen, 1987). The bidder is more likely to use stock to finance the acquisition if the target represents an important addition to the bidder, or if the target is better informed about itself.

*Firm Control and Monitoring:* Bidding firms prefer debt or internal resources to finance an acquisition. While there is a risk of dilution for existing shareholders and a loss of managerial control, the increase in equity would reduce financing constraints (Faccio and Masulis, 2005). Thus, bidding firms for which managers have a greater ownership stake prefer using cash or debt to equity (see Amihud, Lev and Travlos, 1990; Martin, 1996; Ghosh and Ruland, 1998; and Faccio and Masulis, 2005). The empirical literature finds that large acquisitions are most likely to be financed using external funds (Dickerson et al., 2000). Target shareholders who have a high proportion of ownership prefer to receive shares of stock, helping them maintain high ownership as well as retain jobs and voting power influence in the new, combined firm. However, if managers are insignificant shareholders in the target firm, they are not affected much by the new, combined firm ownership (Ghosh and Ruland, 1998). Managerial ownership is therefore an important determinant of this decision.

*Hostility, Competition and Cross-Border Deals:* When the acquisition is hostile or competitive, the bidder would prefer to proceed quickly and deter competition. Thus, cash is typically chosen (Berkovitch and Narayanan, 1990). Moreover, the home bias of foreign investors is documented by Coval and Moskowitz (1999) and Grinblatt and Keloharju (2001).

### **3. Data and Methodology**

#### ***3.1. Hypothesis Development***

To achieve the stated objectives of the study, the following hypotheses are formulated based on theory and the extant literature:

H1: An acquisition is more likely to be financed using equity when the firm has lower cash reserves and/or a limited capacity to raise debt from banks and capital markets.

H2: A debt issue has priority over an equity issue and is more likely when firms are cash-constrained, but still have a sufficient capacity to raise debt

Managers who pursue personal goals at the expense of increasing shareholder wealth are likely to see a debt issue as the least preferred source of financing, as this restricts their control over free cash flows (Jensen and Meckling, 1976). In contrast, an equity issue increases the funds under managerial discretion, which the entrenched manager will prefer. Such agency conflicts between management and shareholders are expected to be stronger in widely-held corporations where shareholder activism and efficient monitoring of managers' decisions are weaker. (Goergen and Renneboog, 2001; Goergen et al. 2005). Therefore, we formulate the next three hypotheses as:

H3: Financing acquisitions by issuing equity is more likely when the acquiring firm has a diffuse ownership structure.

H4: Financing acquisitions by issuing equity is more likely when the acquiring firm has higher growth potential.

H5: Financing acquisitions using debt is less likely if the acquiring firm is more highly leveraged or riskier, or both.

#### ***3.2 Research Design and Methodology***

The variables used in the study are defined in Table 2. To better understand the economic channels that affect the acquirer's choice of financing strategy, we run regressions using the multinomial logit (MNL) and nested logit (NL) models. The reason for considering the two models is that the multinomial logit has the property of *independence of irrelevant alternatives* (IIA). This means the probability of choosing one option is independent of the other options in the set of choices available to the decision-maker. This property has been empirically rejected in some economic experimental settings. However, we consider it as a baseline model because it is well established. In our setting, the four mutually exclusive (i.e., independent) alternatives are cash, debt, debt and equity, and equity. In contrast, the nested logit model, which is an extension of the classic MNL model, allows the decision-maker (i.e., acquirer) to make a financing decision conditional on the preferred method of payment.

In the MNL framework, the financing and the payment decisions are structured as a two-stage problem. In first stage, the method of payment is negotiated, while in the second stage the choice of the means of financing is determined. The probability of choosing a specific financing method is  $P(B)$ , so the method of financing (B) would have a conditional probability of  $P(A|B)$ . Therefore, the probability of a specific financing choice, taking into account the payment method as well as the financing choice, would be written as  $P(B) \times P(A|B)$  (see e.g., Martynova and Renneboog, 2009). This model considers equity-only financing as a benchmark. The model therefore analyzes three binary logit specifications predicting the probability of using a specific source of financing (cash, debt, debt and equity) in relation to equity-only financing. The nested logit model provides a useful robustness check for the MNL, since it relaxes the IIA property. Figure 2 describes how the nested logit is structured in two branches.

### 3.2.1 Sample Selection

This study explores a unique database compiled from SDC Thompson, S&P Capital IQ, Prowess, Capitaline and firm annual reports. The sample is created based on following criteria:

1. The acquirers acquiring majority control
2. The acquisition is in a non-financial sector
3. The acquirer is listed on the National Stock Exchange (India)
4. The time elapsed between two consecutive acquisitions should be one year
5. Financial data is available on Prowess
6. Information regarding how the acquisition was financed could be found.

The final sample consists of a total of 1041 completed acquisitions. The announcement dates were manually verified from reading the archives of corporate announcements or the archives of the stock exchange. Firm websites were also consulted to help identify how acquisitions were financed, as well as to add information about news announcements and firm annual reports. Sources of financing are categorized into 1) internally generated funds (retained earnings), 2) equity issues, 3) debt issues, and 4) a combination of debt and equity issues.

Table 3 shows the means of financing acquisitions in Indian capital markets. The data shows that the most common means of financing (43.4 percent) is internally generated cash flows. Equity issues are the second most preferred source of financing for acquisitions. The least preferred sources are debt and a combination of debt and equity. This result may be explained by the stringent regulations on bank financing for acquisition financing in India. Lastly, Table 4 describes the composition of the sample according to means of payment. The table shows clearly that most deals (68.5 percent) in our sample are paid for using cash reserves, while the least common mode of payment is using equity.

To benchmark our data and help interpret our results, it is instructive to compare the distribution of financing sources (table 3) and methods of payment (table 4) in our sample with summary statistics for M&As in other countries. To summarize, our sample is much more similar to European M&As (where acquisitions tend to be paid with cash) than to US M&As (which tend to be more heavily paid for using stock).

Martin (1996) reports evidence on M&A financing sources for US markets over 1978-1988. In contrast with our sample and the European samples described below, cash is only used 35% of the time in the US sample, while equity is used to finance 40% of acquisitions, and mixed cash/equity 26%. The US sample period studied by Martin (1996), however, is older and may not be comparable to ours or the European studies. Thus, we look at evidence over three decades as shown by Andrade, Mitchell and Stafford (2001). They document that patterns of method of payment for US M&As changed considerably since 1970. In the 1970s, 38.3% were all-cash, 37% all-stock, and 45.1% included at least some stock compensation. In the 1980s, as the number of M&As roughly doubled and the fraction of hostile bids nearly doubled, all-cash gained in importance, rising to 45.3% of acquisitions. In the “friendly” 1990s when only 4% of bids were hostile, however, the importance of all-cash decreased to 27.4%. In addition, the fraction of acquisitions paid entirely in stock increased to 57.8% and the proportion that were paid at least partly with stock increased to 70.9%.

Faccio and Masulis (2005) study M&As in Europe, where a greater proportion of firms are closely held than in the US, and where large shareholders are more common. They argue that the bidder’s payment choice is highly affected by trading off governance issues against debt financing constraints. In our sample (table 4), cash is by far the dominant method of payment and is used 68.5% of the time, while equity and cash/equity are roughly comparable (15.1% and 16.4%

respectively). Faccio and Masulis (2005) find that for the whole European sample of M&As, cash is used for 80.2% of transactions, mixed cash/equity 11.3% and equity only 8.4%. Thus, while the overall picture is similar, cash is used more often in Europe while equity or mixed cash/equity are used less. There is some variation across the 13 European countries in the sample, but in most countries cash is used for 80-90% of transactions. Norway is the most similar country to India in this regard, as cash is only used in 69% of transactions, with 19% mixed and 12% equity only. Finland is an interesting outlier as equity is used much more than in other countries (24.5%). In Finland, cash is only used 65.7% of the time, and a mixed payment 9.8% of the time.

Martynova and Renneboog (2009) provide complementary evidence for the financing sources of M&As in Europe. We contrast their sample statistics with ours (Table 3). They report that for financing, cash is used 43.4% of the time, debt 12.7%, debt and equity 10.2%, and equity only 33.7%. These figures are very close to ours. In our sample, cash financing is used 43.4% of the time (identical to Europe), debt 12.1%, debt and equity 10.2%, and equity only 34.3%. Overall, these results suggest that M&As in India are very similar to Europe in terms of financing, fairly similar in terms of method of payment, and rather different from US M&As.



## **4. Results: Determinants of Financing Decisions for Corporate Acquisitions**

This section presents the results of the study's empirical analysis, and is divided in two parts. The first part presents findings on the determinants of the financing decision. The second part presents an analysis of the valuation effect for acquirers based on their financing decision. This subsection describes results of a univariate analysis of the determinants of acquirer's financing decision. It compares the results according to different sub-samples, based on the choice of financing. The next section summarizes the results concerning the method of payment.

### ***4.1 Determinants of the Acquirer's Financing Decision: Univariate Analysis***

#### ***4.1.1 Cost of Capital Considerations: Pecking Order and Debt Capacity***

Here, the sample is classified based on the means of financing. Tables 5 to 9 present results for the univariate analysis and further compare results across subsamples. First, Table 5 reports the mean value of the variables concerning the acquirer's alternatives for sources of financing and methods of payment. The data (see table 5) confirms that acquirers with high cash flows finance their acquisitions with cash. The ratio of cash flow to the transaction value of such firms is highest, with a value of 2.8. This ratio is only 0.17 when the source of financing is debt, and it is 0.33 when it is equity-financed. The ratio of cash holdings to the transaction value of firms paying with cash is also highest, with a value of 2.93. This ratio is only 0.41 when the source of financing is debt, and it is 0.23 when it is equity-financed. Cash-constrained firms therefore are much more likely to use external sources of financing (table 6). Debt financing is preferred in comparison to equity financing when the acquirer has higher collateral (table 7). Firms that have greater capacity to issue debt will use debt financing. The leverage ratio for acquirers that fund their acquisitions using equity is 0.39 (table 8), but only 0.31 for firms that use debt.

Therefore, overall, the empirical evidence presented here strongly supports the claim that acquisitions are more likely to be equity-financed when the firm has low cash reserves and a limited capacity to use debt (i.e., they are highly leveraged). Moreover, a debt issue has priority over an equity issue when the firm is cash-constrained but still has debt capacity (i.e., it has lower leverage). The literature argues that the financing decision for acquisitions is linked to the acquirer's ownership structure. If the acquirer has majority control, acquisitions are cash-financed. On the other hand, acquisitions are equity-financed when the acquirer has less control. This is confirmed in table 9, as the proportion of the acquirer's ownership control is 38.4 percent for cash financing, but only 23.6 percent for equity funding. Therefore, firms with a more diffuse ownership structure are more likely to issue equity to finance acquisitions.

## ***4.2 Determinants of the Acquirer's Financing Decision: Multivariate Analysis***

### ***4.2.1 Multinomial Logit Model***

The first set of regressions to analyze the acquirer's financing decisions involve the Multinomial Logit (MNL) model. MNL assumes that acquirer selects financing from a set of four mutually exclusive options, namely cash, debt, debt and equity mix, and equity. As the model baseline is equity financing, the analysis considers three binary logits that predict the probability of using a specific source of financing (cash, debt, debt and equity mix) relative to the base probability, which is the likelihood of equity financing. Table 10 presents the results of the model. There are four combinations of payment method and financing in the data. They are i) cash financing (cash-paid/cash-financed acquisitions); ii) debt financing (cash-paid/ debt-financed acquisitions); iii) equity and debt mix financing (cash-paid/ equity and debt-financed and combination-paid/ equity and debt-financed deals); and iv) equity financing (equity-paid/ equity-financed, cash-paid/ equity-financed, and combination-paid/equity-financed).

Table 10 (column 1) also shows that the ratio of acquirer internal cash flows to transaction value (CFLOW/TRANSVAL) is significant, indicating that acquirers prefer to use cash financing when they have high cash flows relative to transaction value. Furthermore, firms with higher levels of collateral (which proxies for debt capacity) prefer debt financing over using equity. A higher Tobin's Q ratio increases the likelihood of equity financing, suggesting that higher-growth opportunity firms prefer to use equity to finance acquisitions. Equity financing is also preferred when the acquisition is of a relatively bigger size (RELVAL). If a larger-size firm acquires a small firm, as it does not have to share risks with the acquired firm's shareholders, it will prefer to finance the transaction using cash reserves when it has less control. When the acquirer's ownership structure is more diffuse, it will prefer to issue equity.

#### *4.2.2 Nested Logit Model*

The NL model allows us to consider the acquirer making a financing decision conditional on the payment decision. Table 11 presents the results of the NL model. In the first stage, we estimate the unconditional logit model describing the payment method. In the second stage, we estimate the effects of variables determining the acquirer's financing decision, conditional on the first stage. The NL regression estimates predict the first-stage unconditional probability and second-stage conditional probability. Table 11, column 1, reports the probability that the acquirer prefers a cash or mixed payment method relative to using equity, as well as preferences concerning cash and equity financing, and debt and equity financing for a mixed payment. Paying in stock is preferred when the target is large relative to the acquirer, and if the target is a listed firm. However, acquirer prefer to make a cash offer for cross-border acquisitions.

Columns 3 and 4 report estimates for the acquirer's conditional probability of financing conditional on a cash payment offer. Column 5 shows the likelihood of debt and equity, and cash

and equity, financing conditional on a mixed payment method. Overall, the results in table 11 show that financing using internal funds is more likely when the acquirer has high cash flows, while debt financing is preferred when the acquirer has higher collateral. Moreover, debt financing for a cash mixed payment is more likely when the acquirer has lower internal funds. Lastly, the results show that debt financing is also preferred when 1) acquirers have lower cash flow to transaction value ratios, 2) poor growth opportunities (Tobin's Q), 3) higher collateral, and 4) lower leverage, with the last two proxies for greater debt capacity.

#### *4.3. Long-run performance*

Prior empirical research on post-acquisition performance has not reached a definitive conclusion (see e.g., Agrawal, Jaffe, and Mandelker, 1992; Loughran and Vijh 1997; Rau and Vermaelen, 1998; Mitchell and Stafford, 2000; Cartwright and Schoenberg, 2006; and Tuch and O'Sullivan, 2007). Furthermore, meta-analyses of the empirical literature on post-acquisition performance also highlight significant variation in performance (King et al. (2004), Tuch and O'Sullivan (2007) and Dutta and Jog (2009)). This line of research concludes that M&A activity typically does not lead to superior financial performance.

In particular, Agrawal, Jaffe, and Mandelker (1992) revisit the "merger anomaly", which is the conclusion reached by the 1980s literature that mergers destroy value, contrary to market efficiency claims (e.g., Ruback, 1988). They confirm the anomaly using a comprehensive sample of US mergers over 1955-1987. They find that the cumulative 5-year post-merger performance of the acquirer is about -10% and significant. However, there is no comparable loss of wealth for tender offers.

Rau and Vermaelen (1998) revisit the issue using the original Fama-French factors over the period 1980-1991. Indeed, Fama and French (1993) argue that the findings of

Agrawal, Jaffe, and Mandelker (1992) could be sensitive to the omission of the size and value factors. Specifically, this is because acquirers tend to be large firms with low book-to-market ratios. However, Rau and Vermaelen's findings support Agrawal, Jaffe, and Mandelker (1992). Contrary to Fama and French's (1993) conjecture, however, the original finding is robust. Mergers lead to significant underperformance (-15%) while tender offers lead to significant overperformance (+5%) in the three years after acquisition.

Loughran and Vijh (1997) study US corporate acquisitions over 1970-1989. They find that abnormal returns for the acquirer are affected by the mode of acquisition (merger or tender offer) and the method of payment (cash, stock or a mix). Acquirer returns are higher for tenders offers and for cash acquisitions, and lower for mergers and stock acquisitions. As a result, long-run acquirer performance ranges from -25% (stock merger) to +61.7% (cash tender offer).

In contrast with the above studies, Mitchell and Stafford (2000) argue that the methodology of computing long-run abnormal return performance (pre- to post-acquisition) may not be reliable, and that the standard bootstrapping approach cannot address this problem. This is essentially because long-run cumulative abnormal returns are correlated across events and firms. They conclude that there is no evidence of significant abnormal returns, positive or negative, after M&As.

Thus, the literature has looked at longer-term consequences of the acquirer's method of payment and financing. For such longer-term impacts, the event study methodology is not well suited. Hitt et al. (1998), Healy et al. (1992) and Harrison et al. (1991) argue that accounting measures such as Return on Assets (ROA) are more appropriate to capture the synergies that are obtained from M&As. This reasoning suggests that the firm's economic

performance is properly reflected in accounting-based measures. Thus, accounting-based ratios represent actual, realized performance as reported in periodic financial statements.

To analyze and understand the impact of a M&A to recognize efficiency gains over a longer horizon, a sufficiently long sample period is required. Thus, to test whether the method of payment and financing used by acquiring firms might affect their post-acquisition performance, we estimate the following regression model.

$$\begin{aligned} performance_i &= \alpha + \beta_1 CashFin_i + \beta_2 StockFin_i + \beta_3 MixedPayment_i \\ &+ \beta_4 CashDebt_i + \beta_5 Size_i + \beta_6 Lev_i + \beta_7 MTB_i + \beta_8 Listed + \varepsilon_i \end{aligned}$$

The regression model is estimated using 1-year, 2-year, and 3-year post-acquisition performance as the dependent variable. Specifically, as a metric of performance we consider post-acquisition Return on Assets (ROA), post-cash flows from operations (OCF), and market-to-book ratios (MTB) which enter as dependent variables. Thus, the model considers the difference in value between 1 year pre-M&A and 1-, 2- and 3- year post-M&A (denoted -1, +1), as well as (-1, +2) and (-1, +3).

The results are reported in Table 12. This table shows that cash-financed acquisitions display a superior performance over a longer-run horizon, according to each of the indicators. Moreover, acquirers that use a combination of stock and cash coupled with debt and equity financing display positive results. Meanwhile, for acquirers with equity financing and stock payments there is mixed evidence, as ROA and OCF are improved, but MTB is lower. The results also show that using cash payments is positively linked to greater post-acquisition returns for the acquirer. Payment in stock, however, is negatively linked to post-acquisition returns in the longer run (as defined here). Some negative, but not statistically significant, results are found for acquirers

using cash and debt financing. Overall, our finding for long-run performance are generally consistent with the prior literature.

## **5. Conclusion**

This study examines the financing and payment method decisions involved in 1041 corporate acquisitions undertaken during the period 2000-2018 among firms in India, a major emerging economy with fast-growing capital markets. Using a unique dataset of Indian firms, we investigate the relative importance of variables affecting the method of financing acquisitions. This study considers the interrelationships between market timing, growth opportunities, the bidder's financial condition, pecking order theory, firm control, managerial preferences and information asymmetry, together with the method of payment (cash, equity, debt, cash and equity, debt and equity). We find a positive relationship between cash payment and pecking order preferences, relative size and tender offer. The method of payment also depends considerably on the cash/transaction value and cross-border acquisition variables. We do not find much empirical support for variables such as financial leverage, collateral and market to book ratio in terms of affecting the method of payment.

The empirical results obtained from estimating nested logit models show that different variables help explain the decisions for 1) the means of payment and 2) the sources of financing for an acquisition. This study finds that size affects the method of payment in the case of cash payments. We further document a positive relationship between relative size and cash payment, as well as debt financing. Considering the characteristics of the acquisition, we find that an increase in tender offers leads to greater payments using cash reserves. We also find an increase in cross-border acquisitions in the case of cash and mixed payments.

We also examine the longer-term performance of acquirer firms (up to three years post-acquisition). Our findings are consistent with the prior literature, as acquisitions using cash as method of payment lead to positive outcomes, while acquisitions that are paid for using stock perform less well.

The findings described in this study are in line mainly with pecking order theory and cost of capital considerations. When firms have more cash reserves, the cash /transaction value ratio increases and this translates into a greater likelihood of cash payments or mixed payments over stock payments. While cash affects some financial variables, we do not find, however, much support for financial variables affecting the use of debt to pay for acquisitions. Finally, this study has relevant managerial and corporate policy implications. The findings point out that the corporate firm's decisions regarding the means of payment for an acquisition are not explained by the same variables as the sources of financing for the transaction. Indeed, for instance, how the acquisition is financed sends important information about the acquisition's profitability.

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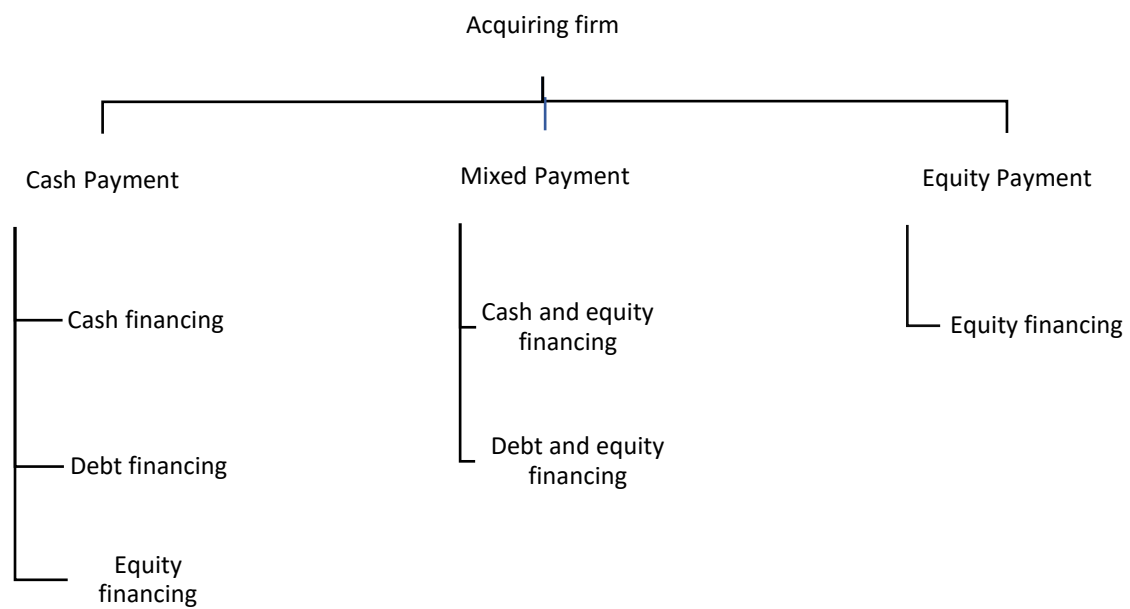
## Tables and Figures

### Overview of Different Financing Options



**Figure 1: Overview of Different Financing Options**

Notes: QIP is “qualified institutional placement”; NBFC is “non-banking finance companies”; NCD is “non-convertible debentures”; CCD is “compulsorily convertible debentures”



**Figure 2: Specification of the nested logit model**

**Table 1: Summary of Findings of Empirical Studies on Financing of Corporate Acquisitions**

S.no.	Title	Author	Journal	Year	Citations	Content	Method
1	Corporate Control and the Choice of Investment Financing: The Case of Corporate Acquisitions	Amihud et al.	Journal of Finance	1990	537	Cash or Equity? Control Hypothesis is proposed and empirically tested. Discusses effect of tax and information asymmetry on mode of payment.	Logistic regression Event study
2	Theory of The Firm: Managerial Behavior, Agency Costs and Ownership Structure	Jensen and Meckling	Journal of Financial Economics	1976	65,431	One of the first articles on agency theory	Theoretical Contribution
3	Managerial Ownership, the Method of Payment for Acquisitions, and Executive Job Retention	Ghosh and Ruland	Journal of Finance	1998	198	Focus is on target managers. Targets managers prefer payment in stock when they want to have control in the combined firm. Job retention of target manager. Stock payment as a proxy for value of control.	Multinomial logistical regression
4	The Choice of Payment Method in European Mergers and Acquisitions	Faccio and Masulis	Journal of Finance	2005	585	Deal and target characteristics affect payment mode. Label deals as only stock, only cash and mixed. Bidder is more important for payment choice decision because if bidder is not satisfied then the deal will be aborted. The paper recognises that targets preference may also influence payment choice. Variable definitions given.	Tobit Regression
5	What determines the financing decision in corporate takeovers: Cost of capital, agency problems, or the means of payment?	Martynova and Renneboog	Journal of Corporate Finance	2009	159	Transaction financing. Discusses the idea of same mean of payment but different source of payment. The choice of financing depends on bidders' pecking order preference, corporate governance structure and the strategic preferences. Pecking order theory, agency theory, debt overhang problem explains financing decision. Focus is on value effect of financing decision.	Multinomial logistic regression Nested logistic regression



6	Do stock-financed acquisitions destroy value? New methods and evidence	Golubov et al.	Review of Finance	2016	6	Do stock financed acquisitions destroy value? Stock financed acquisition is thought of in two parts: takeover and stock issue. A combination of an investment and financing decision. A part of market response is because of equity issue. Results contradict overvalues equity hypothesis.	Propensity score matching OLS regression Probit regression
7	Corporate Takeover Bids, Methods of Payment, and Bidding Firms' Stock Returns	Travlos	Journal of Finance	1987	1541	Explains announcement returns using method of payment. Hypothesis - equity financing is expected to have negative impact while cash financing is expected to have non-negative impact. Findings are consistent with signaling hypothesis	Event study Cross-sectional analysis using regression
8	The Method of Payment in Corporate Acquisitions, Investment Opportunities, and Management Ownership	Martin	Journal of Finance	1996	723	Examines the relation between payment method and investment opportunities and ownership structure. Growth firms prefer stock financing. Hypothesis - investment opportunity hypothesis, risk sharing hypothesis, control hypothesis, cash availability hypothesis, outside monitoring hypothesis.	Logistic regression
9	Glamour Acquirers, Method of Payment and Post-acquisition Performance: The UK Evidence	Sudarsanam and Mahate	Journal of Business Finance and Accounting	2003	298	Glamour acquirers - high PER acquirers, high MTBV. Value acquirers - low PER acquirers, low MTBV. Glamour acquirers use equity while value acquirers use cash.	Long-term event study
10	The Detering Role of the Medium of Payment in Takeover Contests: Theory and Evidence from the UK	Cornu and Isakov	European Financial Management	2000	20	Expected payoff is higher with a cash bid. More likely to have competition among bidders post equity offer than after cash offer. Cash offer deters competition, increasing payoff.	Bayesian equilibrium analysis Logistic regression
11	Takeovers of Privately Held Targets, Methods of Payment, and Bidder Returns	Chang	Journal of Finance	1998	759	Focus is on private targets. Hypothesis - limited competition hypothesis, monitoring hypothesis, information hypothesis.	Event study Weighted OLS regression

12	The Equity Wealth Effects of Method of Payment in Takeover Bids for Privately Held Firms	Rosa et al.	Australian Journal of Management	2004	15	Takeover bids for unlisted firms. Presence of competing hypothesis - positive/negative market response. Results are contrary to Chang (1998).	Event study regression
13	Shareholder Wealth Effects of European Domestic and Cross-Border Takeover Bids	Goergen and Reneboog	European Financial Management	2004	567	Market response on acquisitions. Cash bids trigger higher market returns. Domestic bids create more short term wealth compared to cross border bids. Overvalued equity hypothesis.	Event study regression
14	Cross-country determinants of mergers and acquisitions	Rossi and Volpin	Journal of Financial Economics	2004	1031	A cross country study. The probability of an all-cash bid decreases with the level of shareholder protection in the acquirer country. Stock payment requires high shareholder protection.	Probit regression
15	The probability of an all-cash bid decreases with the level of shareholder protection in the acquirer country.	Heron and Lie	Journal of Financial and Quantitative Analysis	2002	305	The findings reveal that mode of payment provides no information about future operating performance of the acquirer. Then why post acq. long term returns are lower for stock bid? Signaling or change in capital structure	Event study regression

**Table 2: Variable definition**

Transaction Value (TRANSVAL)	Transaction value is defined as the sum of the announced equity value and net debt. It's the Price paid for the acquisition in INR.
Cash Flow/Transaction value (CFLOW/TRANSVAL)	The acquirer's cash flow generation is the ratio of the net income plus depreciation and amortization and the transaction value.
Cash Holdings/ Transaction value (CHLDG/TRANSVAL)	The ratio is defined as the acquirer's cash and short term investments over the transaction value.
Collateral	The acquirer's collateral is calculated as the ratio of Property, Plant and Equipment and total assets.
Leverage	Leverage is the ratio of long-term debt to total assets at the end of the year before the deal.
Tobin's Q	Tobin's Q or Q ratio can be calculated as the acquirer's ratio of market value of equity and book value of debt over the book value of equity and debt. The market value of equity is taken 60 days prior to deal announcement; book values of equity and debt are at the year-end prior to deal announcement
Relative Size (RELVAL)	The relative size of acquisition can be calculated as the deal value over the acquirer/ issuer market value of equity 4 weeks prior to the announcement.
Control (%)	Percentage of controlling stake owned by the promoter/owner of the acquiring company.
Control ( $20 < C < 51$ )	The dummy variable equals one if the promoter/owner of the acquiring firm has less than majority stake, 0 otherwise
Cross-Border Bid	The dummy variable equals one if the bidder and target are from different countries, and equals zero otherwise.
Multibid	The dummy variable takes a value of 1 for deals involving competing bidders, 0 otherwise
Listed Target	The dummy variable takes a value of 1 for acquisition of listed target, 0 otherwise
Tender Offer	The dummy variable equals one if the bidder makes a public offer to purchase shares of the target firm.
Market to Book Ratio	Market to book ratio is the ratio the market value of equity 4 weeks prior to the acquisition announcement to the book value (shareholders equity) of equity at the fiscal year-end prior to the acquisition announcement.
Financing Method	The unordered categorical variables are Stock=1, Cash=2, Mixed Payment (Stock and Debt, Cash and Stock)=3, Debt=4

**Table 3: Sample Composition by Sources of Financing for Acquisitions**

<b>Sources of Finance</b>	<b>Number (%)</b>
Cash Financing	452 (43.4)
Debt Financing	126 (12.1)
Debt and Equity Financing	106 (10.2)
Equity Financing	357 (34.3)
<i>Total</i>	<i>1041 (100)</i>

**Table 4: Sample Composition by Method of Payment for Acquisitions**

<b>Method of Payment</b>	<b>Number (%)</b>
Cash Payment	713 (68.5)
Equity Payment	157 (15.1)
Cash and Equity Payment	175 (16.4)
<i>Total</i>	<i>1041 (100)</i>

**Table 5: Mean of Cash Flow/Transaction Value ratio, and Mean of Financing of Acquisition and Method of Payment**

Variable	Cash financing	Debt financing	Equity financing				Debt and Equity Financing			Whole Sample
	Cash Payment	Cash Payment	All Payment	Cash Payment	Equity Payment	Combination	All Payment	Cash Payment	Combination	
CFLOW/TRANSVAL	2.8	0.17	0.32	0.54	0.12	0.82	0.24	0.33	0.27	0.97
CFLOW/TRANSVAL		Method of Payment				Means of Financing				
<b>F-Statistic (p-Value)</b>	6.2***(0.000)	All Payment				Cash financing, Debt financing, Equity financing, Debt and Equity Payment				
	11.8***(0.000)	Cash Payment				Cash financing, Debt financing, Equity financing, Debt and Equity financing				
	8.1***(0.000)	Mixed Payment				Debt and Equity Financing, Equity Financing				
	3.73***(0.007)	Cash Payment, Equity Payment and Combination				Equity Financing				
	1.31 (0.0302)	Cash Payment & Combination				Debt and Equity Financing				

\*\*\*, \*\*, \* shows 1 percent, 5 percent and 10 percent levels of significance, respectively.

**Table 6: Mean Value of Cash Holding/ Transaction Value and Mean of Financing of Acquisition and Method of Payment**

Variable	Cash financing	Debt financing	Equity financing				Debt and Equity Financing			Whole Sample
	Cash Payment	Cash Payment	All Payment	Cash Payment	Equity Payment	Combination	All Payment	Cash Payment	Combination	
CHLDG/TRANSVAL	2.93	0.47	0.23	0.68	0.16	0.62	0.11	0.12	0.28	0.84
CHLDG/TRANSVAL		Method of Payment				Means of Financing				
<b>F-Statistic (p-value)</b>	7.6***(0.000)	All Payment				Cash financing, Debt financing, Equity financing, Debt and Equity Payment				
	10.8***(0.000)	Cash Payment				Cash financing, Debt financing, Equity financing, Debt and Equity financing				
	6.7***(0.000)	Mixed Payment				Debt and Equity Financing, Equity Financing				
	4.9***(0.008)	Cash Payment, Equity Payment and Combination				Equity Financing				
	1.45 (0.152)	Cash Payment & Combination				Debt and Equity Financing				

\*\*\*, \*\*, \* shows 1 percent, 5 percent and 10 percent levels of significance.

**Table 7: Mean Value of Collateral and Mean of Financing of Acquisition and Method of Payment**

Variable	Cash financing	Debt financing	Equity financing				Debt and Equity Financing			Whole Sample
	Cash Payment	Cash Payment	All Payment	Cash Payment	Equity Payment	Combination	All Payment	Cash Payment	Combination	
Collateral	0.41	0.42	0.41	0.42	0.44	0.41	0.42	0.51	0.43	0.43
Collateral		Method of Payment				Means of Financing				
<b>F Statistic (p-value)</b>	0.8(0.483)	All Payment				Cash financing, Debt financing, Equity financing, Debt and Equity Payment				
	3.6**(0.013)	Cash Payment				Cash financing, Debt financing, Equity financing, Debt and Equity financing				
	1.24 (0.274)	Mixed Payment				Debt and Equity Financing, Equity Financing				
	0.86 (0.461)	Cash Payment, Equity Payment and Combination				Equity Financing				
	0.71 (0.471)	Cash Payment & Combination				Debt and Equity Financing				

\*\*\*, \*\*, \* shows 1 percent, 5 percent and 10 percent levels of significance.

**Table 8: Mean Value of Leverage and Mean of Financing of Acquisition and Method of Payment**

Variable	Cash financing	Debt financing	Equity financing				Debt and Equity Financing			Whole Sample
	Cash Payment	Cash Payment	All Payment	Cash Payment	Equity Payment	Combination	All Payment	Cash Payment	Combination	
Leverage	0.43	0.31	0.38	0.32	0.39	0.42	0.44	0.52	0.45	0.45
Leverage		Method of Payment				Means of Financing				
<b>F-statistic (p-value)</b>	14.6***(0.000)	All Payment				Cash financing, Debt financing, Equity financing, Debt and Equity Payment				
	8.6***(0.000)	Cash Payment				Cash financing, Debt financing, Equity financing, Debt and Equity financing				
	4.9***(0.008)	Mixed Payment				Debt and Equity Financing, Equity Financing				
	4.2** (0.029)	Cash Payment, Equity Payment and Combination				Equity Financing				
	0.73 (0.451)	Cash Payment & Combination				Debt and Equity Financing				

\*\*\*, \*\*, \* shows 1 percent, 5 percent and 10 percent levels of significance.



**Table 9: Percentage of Control and Mean of Financing of Acquisition and Method of Payment**

Control	Cash financing	Debt financing	Equity financing				Debt and Equity Financing			Whole Sample
	Cash Payment	Cash Payment	All Payment	Cash Payment	Equity Payment	Combination	All Payment	Cash Payment	Combination	
Control (%)	38.4	25.2	33.3	36.2	23.6	28.4	19.2	18.6	20.1	32.5
Control		Method of Payment				Means of Financing				
F-statistic (p-value)	11.3*** (0.000)	All Payment				Cash financing, Debt financing, Equity financing, Debt and Equity Payment				
	5.2** (0.002)	Cash Payment				Cash financing, Debt financing, Equity financing, Debt and Equity financing				
	0.82 (0.489)	Mixed Payment				Debt and Equity Financing, Equity Financing				
	1.73 (0.162)	Cash Payment, Equity Payment and Combination				Equity Financing				
	0.8 (0.491)	Cash Payment & Combination				Debt and Equity Financing				

\*\*\*, \*\*, \* shows 1 percent, 5 percent and 10 percent levels of significance.

**Table 10: Determinants of acquirer's financing decisions: Multinomial Logit Model**

Explanatory Variable	Cash Financing vs Equity Financing		Debt Financing vs Equity Financing		Debt and Equity Financing vs Equity Financing	
	Coefficient	P(r) > $\chi^2$	Coefficient	P(r) > $\chi^2$	Coefficient	P(r) > $\chi^2$
Intercept	-5.13***	0.002	-6.34***	0.003	-8.52***	0.002
CFlow/Transval	0.02*	0.058	0.03	0.060	-0.06*	0.074
Collateral	1.57**	0.042	1.63**	0.041	1.62	0.122
Leverage	0.36	0.701	0.28	0.391	-0.16	0.621
Tobin Q	-0.07**	0.041	-0.05	0.310	-0.12**	0.041
RelVal	-3.23***	0.000	-2.27**	0.061	1.57*	0.064
Control 20<C<51	1.79**	0.31	0.65	0.391	0.856	0.512
Cross border	0.06	0.857	0.37	0.611	-1.84***	0.005
Listed target	-0.45	0.162	-0.18	0.827	-1.5126*	0.061
Tender offer	0.22	0.387	0.42	0.512	0.04	0.912

\*\*\*, \*\*, \* shows 1 percent, 5 percent and 10 percent levels of significance.

**Table 11: Determinants of Financing Decisions Conditional on Payment Decision**

Explanatory Variable	First step: Decision of the payment method				Second step: Decision of the source of financing: conditional on the payment method					
	Cash payment vs equity payment		Mixed payment vs Equity payment		Cash Payment				Mixed Payment	
					Cash Financing vs Equity Financing		Debt Financing vs Equity Financing		Debt and Equity Financing vs Equity Financing	
	Coeff.	P(r) > [t]	Coeff.	P(r) > [t]	Coeff.	P(r) > [t]	Coeff.	P(r) > [t]	Coeff.	P(r) > [t]
Intercept	2.67**	0.13	-4.46**	0.021	3.82*	0.071	-12.17***	0.005	-4.28	0.482
CFlow/ Transval	0.06	0.373	-0.051	0.012	0.21***	0.007	0.06	0.501	-0.21***	0.007
Collateral	1.67	0.278	0.31	0.752	0.73	0.581	0.78*	0.059	3.01**	0.037
Leverage	0.47	0.745	1.07	0.413	1.84	0.393	-0.91	0.431	-1.93**	0.024
Tobin Q		-0.14	0.115	-0.19	0.311	-0.29**	0.048			
RelVal	-5.01	0	-2.21	0.13	-4.18	0.414	-1.34	0.401	2.87*	0.071
Control 20<C<51	4.21**	0.029	2.41	0.521	0.62	0.261	-0.31	0.751	0.28	0.671
Cross border	0.36***	0.000	-0.45	0.412	-0.41	0.422	-0.62	0.213	-2.81**	0.019
Listed target	-0.57***	0.000	-0.76	0.091	0.41	0.712	1.12	0.171	-1.40	0.467
Tender offer	0.11	.522	-0.05	0.769	-0.42	0.212	0.68	0.812	0.84	0.414

\*\*\*, \*\*, \* shows 1 percent, 5 percent and 10 percent levels of significance.

**Table 12: Post-acquisition performance (3-year horizon)**

Dependent Variable	1-year post-acquisition performance (-1,+1)			2-year post-acquisition performance (-1,+2)			3 year post-acquisition performance (-1,+3)		
	ROA	OCF	MTB <sub>1</sub>	ROA	OCF	MTB <sub>2</sub>	ROA	OCF	MTB <sub>3</sub>
Intercept	-0.123 (-1.58)	-0.103 (2.61***)	-1.32 (1.57)	-0.103 (-1.42)	-0.136 (1.48)	-1.211 (-1.61)	-0.043 (-1.25)	-0.125 (-1.42)	-1.313 (-1.26)
CashFin	0.11*** (3.53)	0.12*** (3.23)	0.088*** (2.718)	0.09*** (2.61)	0.11*** (3.45)	0.091*** (2.634)	0.10*** (2.89)	0.11*** (2.91)	0.102*** (2.781)
StockFin	-0.032*** (-3.591)	-0.027*** (-4.197)	-0.026 (-0.291)	-0.068*** (-3.273)	-0.035*** (-3.831)	-0.037 (-0.404)	-0.076*** (-2.821)	-0.031*** (3.524)	-0.033 (-0.324)
MixedPayment	0.03** (2.103)	0.10* (1.79)	0.097** (1.99)	0.08*** (2.61)	0.14*** (3.98)	0.071*** (2.947)	0.09*** (2.89)	0.14*** (2.87)	0.14*** (4.781)
CashDebt	-0.021 (-1.591)	-0.027 (-0.197)	-0.021 (-0.151)	-0.062 (-0.273)	-0.028 (-1.384)	-0.032 (-0.204)	-0.062 (-1.461)	-0.021 (0.524)	-0.023 (-0.295)
Size	0.015*** (4.378)	0.013*** (7.089)	0.102*** (5.203)	0.011*** (3.812)	0.013*** (4.721)	0.109*** (5.777)	0.009*** (2.761)	0.011*** (5.916)	0.111*** (5.632)
Lev	0.091*** (3.071)	0.012 (1.293)	-0.43*** (-2.968)	0.11*** (4.812)	0.014 (1.713)	-0.38** (-3.228)	0.13*** (3.491)	0.018* (1.951)	-0.249*** (-3.336)
MB	-0.001** (-2.38)	-0.001 (-0.491)	0.045*** (3.632)	-0.004** (-2.832)	-0.003 (-0.191)	0.052*** (4.232)	-0.001* (-1.871)	-0.001 (-0.121)	0.064*** (4.751)
Listed	-0.004 (-1.561)	-0.001 (-0.045)	0.03 (1.231)	-0.009 (-1.611)	-0.003 (-0.087)	0.06 (1.591)	-0.009 (-1.561)	-0.003 (-0.095)	0.08 (1.538)
N	1041	1041	1041	962	962	962	891	891	891
R <sup>2</sup>	0.198	0.193	0.194	0.181	0.189	0.171	0.174	0.185	0.188

This table reports, for different horizons, the results of regressions investigating the method of payment used by acquiring firms and the acquirers' post-acquisition performance as measured by accounting variables. Coefficient estimates are reported, with t-statistics in parentheses. Three different specifications and three different horizons are considered. The different dependent variables are: post-acquisition return on assets (ROA), cash flow from operations (OCF), and market-to-book ratios (MTB). The three horizons considered are 1 year, 2 years and 3 years post-acquisition. The main independent variable of interest is financing used by the acquiring firm. *CashFin* is a dummy variable which equals 1 when the acquisition is financed by cash and uses cash as payment, and 0 otherwise. *StockFin* is a dummy variable which equals 1 when the acquisition is financed by equity and uses stock as payment, and 0 otherwise. *MixedPayment* is a dummy variable that equals 1 when the acquisition is financed by equity and cash, and where the payment is mixed using stock and cash, and equals 0 otherwise. *CashDebt* is a dummy variable which equals 1 in the case that the acquisition uses a cash payment and is financed by debt, and equals 0 otherwise. See Table 2 for a definition of the other control variables.