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IMPACT OF MONITORING MECHANISM ON MODE OF PAYMENT IN CORPORATE MERGER AND ACQUISITIONS IN PAKISTAN

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ABSTRACT

This study examines the impact of bidder and target firm characteristics and corporate motoring mechanism on payment mode choice in corporate sectors mergers and acquisitions (M&A) in Pakistan from 2008-2015. The results show a negative and linear relation between managerial ownership and cash financing that supports the risk reduction hypothesis in nonfinancial sector. Outside monitoring hypothesis is also validated. In financial sector, the ownership structure has no significant impact on payment mode choice. In Pakistan the directors' ownership is quite limited and most of banks are controlled by dominant groups through the associated companies, so the existence of major outside shareholders does not play a significant monitoring role.

Keywords: Mergers & acquisitions; mode of payment; ownership structure; bidder characteristics; target characteristics; Pakistan.

JEL Classification: G32, G34

1. INTRODUCTION

Mergers and Acquisitions (M&A) have increasingly become a substantial tool in order to respond to increased world competition, the enlargement of global business markets and business firm's economic survival. Mergers and acquisitions are major events in the life of firm, many models and theories related to payment mode in M&A deals have been developed in past, one of them is the asymmetric information theory. This theory represents the information asymmetry between the insiders (i.e. managers) and outside parties regarding the company's stock value and available opportunities of investment. Another group of theories deal with control of insiders i.e. managers by outside shareholders. The outside shareholders who own a small part of a company's shares do not afford to control managers' actions because of the cost of time and money is involved. However the investors owning large amounts of shares of company are motivated to control insiders' actions i.e. to monitor their investment and financing decisions. Since the stock payment to finance the mergers deal are not well thought by outsiders so firm's shareholders force the managers to finance the deal amounts in the form of cash rather than stock to avoid the negative impact on firm's stock valuation [Chevalier and Redor (2008)].

Other studies have examined the acquirer ownership variables' impact on capital structure decisions of firm. The focus of these studies is at two opposite hypothesis

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that explore the relationship between insider's ultimate control and firm leverage [Anderson and Reeb (2003), King and Santor (2007), Ellul (2008), Ben-Andre and Amar (2009)]. The first theory is related to risk-reduction motivation which suggests that shareholders of a controlling group will hesitate to use debt as a mode of financing because leverage increases a firm's risk of bankruptcy, given the undiversified nature of firm's portfolios and significant amount of wealth is invested in a group of firms. In comparison, the control motivation theory implies that inside block-holders are more likely to use debt rather than stock as a mode of financing in order to avoid dilution of their control in firm and also to retain the private incentives associated with it. However, the results of studies are mixed regarding the relationship between managerial ownership and debt financing. The bidder and target firm's financial characteristics also impact the mode of payment such as cash availability, collateral, leverage and bidder's profitability, bidder and target firm' ownership structure [Chaney *et.al.* (1991), Martin (1996), Chang and Mais (2000), Faccio and Masulis (2005), Ben-Andre and Amar (2009)].

The choice of payment mode in merger and acquisition deals is a subject of a number of previous studies and empirical researches, which have focused on developed economies. But none of the study has been found which considers this issue in a developing economy like Pakistan, so the motivation behind the present study is to examine this issue in Pakistan. By examining the previous empirical literature, the focus of the present study is to investigate the impact of corporate governance variables along with bidder and target firm characteristics on mode of payment choice in corporate mergers and acquisitions in Pakistan. The data used in the study includes the mergers and acquisition events from 2005-2015. There are 56 nonfinancial and 48 financial M&A events, but separate analysis is performed due to fundamental differences between the structures of the two sectors.

The present study contributes to existing literature in several ways. Firstly, in developing economies like Pakistan, mergers and acquisitions have not yet received much attention. The studies regarding the mergers and acquisitions in Pakistan have mostly focused on financial sector and analyzed the pre and post-merger performance. Secondly, as per the available literature not any study has been found that explored the role of bidder and target firm's characteristics on payment mode choice in M & A in Pakistan. Thus, the present study is an attempt to fill this research area gap by examining the bidder firm's ownership, financial, corporate governance variables and target firm's variables impact on mode of payment choice in corporate sector M&A in Pakistan. Thirdly, the study adds to existing literature by examining the determinants of payment mode choice in financial as well as nonfinancial sector mergers and acquisitions.

The remainder of the study is organized as follows. The section two reviews with the relevant literature on factors influencing choice of mode of payment by M&As. Third section discusses methodology applied for analysis and data. The empirical findings and discussion of results is presented in section four. Section five conclude the study and draws implications.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

This section reviews the relevant literature done in this area and is divided into different sections and hypotheses are formulated based on the literature review.

2.1. Bidder firm characteristics

Managerial ownership hypothesis:

The theory of management control documented by Harris and Raviv (1988) and Stulz (1988) reveals that managers are hesitant to lose their control in firms and prefer to use cash as a payment mode to finance mergers & acquisitions. Previous studies [Amihud *et.al.* (1990), Martin (1996), Ghosh and Ruland (1998), Yook *et.al.* (1999), Faccio and Masulis (2005), Ben-Andre & Amar (2009)] investigate the relation between corporate ownership considerations and the mode of payment in corporate mergers and acquisitions. Managers' preferences for financing the investments are related with their desire to retain control over firm. Since stock issuance dilutes the managers' control, they prefer to use debt or internal funds for financing acquisitions in order to retain their control over the acquiring firm and to enjoy the personal incentives attached with it.

Amihud *et.al.*(1990) examined the relation between corporate control considerations and the choice of mode of payment in case of corporate investments and acquisitions for US Fortune 500 companies acquired other companies during the period 1981 to 1983. The results of study show that higher the insiders ownership in the bidder firm, higher the chances the deal is financed with cash payments rather than by stock issuance. These findings can also be related to information asymmetry between corporate insiders and outside investors. If insiders hold a significant number of shares which they think are undervalued, they are less willing to issue stock for financing acquisitions.

However, Martin (1996) documents a non-linear relation between managers' ownership and the probability of stock issuance to finance M&A. The results reveal that managers are not concerned by dilution of control rights at high and low level of their ownership. But at intermediate level of ownership, they may lose control in firm by stock issuance as results show a significant negative relationship between insiders ownership and stock financing over the middle level of ownership (between 5 and 25%).

The risk reduction and control motivation hypothesis of managerial control is found suitable by Yook *et.al.* (1999) to explain the choice of payment mode and also the reaction of market to stock announcement. Their findings show a significant selling by acquiring firm's management before stock issuance as compared to cash financing. This implies the selling of stock by insiders before stock offerings because stock offer will result in decline of stock prices. Moreover, the results show a significant inverse relationship between pre stock announcement managerial stock selling and abnormal returns gained by offer in acquiring firms. On other side, after

controlling for previous insider trades, acquiring firms with large managerial holdings are more likely to use cash offers.

The two related empirical studies that look at entrenched managers and at corporate governance and managers' investment policies are those of the Berger, *et.al.* (1997) and Litov and John (2006) respectively. Contrary to control motivation hypothesis, Berger *et.al.* (1997) explored that entrenched managers reduce the use of debt in firm and the finding is consistent with risk reduction hypothesis. John and Litov (2006) show that better managed firms have riskier investment and low level of debt as compared to badly managed/governed firms that focus on safe investment. In this regard, firms with entrenched managers and weak corporate governance mechanism select conservative policies of investment and use more debt.

Brailsford *et.al.* (2002) documents a negative relation between managerial ownership and level of leverage, which implies that lower level of managerial ownership leads to reduction of agency problems and results in high debt level. On the opposite side higher level of insiders ownership leads to managerial opportunism and ultimately towards low debt level.

Faccio and Masulis (2005) examine the determinants of payment mode in M&A by using a sample of European mergers over the period of 1997 to 2000. The focus of study is on tradeoff between acquirer firm corporate control threats and its financial constraints. Similar to Martin (1996), nonlinear association between bidder firm's largest shareholder voting rights and the percentage of cash used for financing merger deals is tested and results confirm the non-linearity hypothesis in case of UK and Irish acquirers. However, results show a positive relation between concentrated ownership structure and % of cash financing in case of continental European bidders. The results show that incentives to select cash as a payment mode are high when bidder firm's major shareholders have medium level of control i.e. 20 to 60%. This is especially the case when acquired firm has concentrated ownership structure.

Ben-Andre and Amar (2009) investigate the relation between family ultimate control and choice of payment mode in Canadian M&A undertaken during period of 1998 to 2004. The authors considers the trade-off between risk reduction and control motivation and the % of cash offering by bidding firm to finance the M&A deals. The findings reveal a positive relation between family control and % of cash financing, which means that ultimate owners don't want to dilute their control by issuing shares. There exist a negative relation between family use of control enhancing techniques, like pyramids structure and dual class shareholdings, and the likelihood of cash financing. Ellul (2008) documents that control motivation of inside block-holders affect the firm's capital structure decisions. By using panel data of 5975 firms from 38 countries, the results of study show that family owned firms have high debt ratios than nonfamily owned firms, institutional shareholders do not influence capital structure decisions, debt in family owned firms is used as an alternate of other control enhancing techniques, like pyramid and cross shareholding structures.

By studying previous literature, it is documented that relationship between management ownership and payment mode to finance merger and acquisition deals is mixed. Some studies show a positive relation between cash payment and managerial ownership, which validates the control motivation theory while others support the risk reduction hypothesis. So, we develop our hypothesis that:

Hypothesis 1a: *Ceteris paribus, there exist a significant relationship between managerial ownership and % of cash to finance the M&A deal.*

Hypothesis 1b: *Ceteris paribus, there exist a non-linear relationship between managerial ownership and % of cash to finance the M&A deal.*

Outside monitoring hypothesis:

According to Jensen (1991) active external shareholders are in benefit to firms for their incentives to perform expensive monitoring functions. Block-holders and institutional investors are instances of possible active shareholders. Black (1992) documents that institutional investors perform functions that more closely line up managerial motives with firm's investors. For instance, institutional investors and external block-holders are in a position to assist the antitakeover campaigns, to endorse a suitable management recompense system, reinforce the institutions opinion on firm's board and perhaps to assist the board themselves. Furthermore, some institutional investors directly connect with high-ranking executives and hence can affect the terms and conditions of M&A deals. Meanwhile empirical substantiation shows that stock financed deals usually decrease the wealth of the bidder firm's investors, so the probability of acquisitions being financed with stocks would be low in presence of institutional and external block-holders.

Martin (1996) explores that high level of institutional and outside block holdings considerably reduce the chances of stock financing, even though block holdings by persons unrelated with management do not significantly affect payment mode, consequently provide backing to the view that institutions perform as external monitors of management behavior. Following ineffective control challenges, Denis & Serrano (1996) documents that turnover of management is intense among companies with presence of an outside block-holder, however managers tend to keep their jobs even with poor performance in firms without existence of outside investors. Berger *et.al.* (1997) shows a positive relationship within leverage ratio and presence of an outside block-holder, which suggests that managers are required to increase debt level in presence of an outside monitor. Goergen & Renneboog (1999) examine the ownership structure in UK firms. The findings reveal that ownership structure in UK firms on average is dispersed. Institutional investors represent an important group of shareholders but they follow submissive strategies and do not use their voting rights related to shares that increases the influence of directors, who are the second group of most important investors.

Inside block-holders are not the only group with high motivations of control; institutional block-holders also have a comparatively big stake in firm's shares which can give them motivation of control. Yet, institutional block-holders don't have a

long-term existence in firm, there is limited active involvement by them in management and their monitoring level of firm's management is low. Tufano (1996) documents that institutional shareholders 1) have significant ownership in diverse firms and therefore are diversified 2) do not play active role in monitoring of firm's management 3) have incentive arrangements same as atomistic. According to Karpoff (2001) institutional investor's involvement leads to little changes in governance of firms. Agreed with this indication, one concludes that institutional block-holders' motivation of control is not sufficient to put any important influence on capital structure decisions in firms. Also, because of business relations between institutional shareholders and corporate customers, institutions are not going to vote against their corporate customer's management proposals. According to Matvos and Ostrovsky (2008), institutional shareholders have cross-holdings in both the target and acquirer firm's shares, so they vote for mergers even when bidding firm's interests are not met.

The results of the previous studies are mixed regarding the relationship of institutional shareholding and outside block-holder with mode of payment used to finance the deal. If the outside investors in firm play an active monitoring role then their exist a positive relation between outside block-holders and % of cash financing in merger deals, otherwise the relation is found to be negative. The following hypotheses are developed by studying previous literature:

Hypothesis 2a: *Ceteris paribus, there exists a significant relation between institutional ownership and % of cash used to finance M&A deals.*

Hypothesis 2b: *Ceteris paribus, there is a significant relationship between outside block-holder and % of cash used to finance M&A deals.*

Acquirer Corporate Governance Variables:

The board of directors in a company is a corporate body at higher level that is accountable for firm management and its operations. It performs a significant role regarding capital structure decisions. However, the evidence is mixed regarding the direction of relation between capital structure and board size. According to Berger (1997) firms with large board size usually have low debt ratios. The reason behind it is that the large size boards of directors apply stress on management to follow low leverage level and improve the performance of company.

In contrast, Wen *et.al.* (2002) documents a positive relation between capital structure and board size. The results reveal that big size boards are following a policy of high debt level in order to improve firm value specifically when they face high monitoring by regulatory establishment. It's also contended that large boards can face difficulty in reaching at an agreement which eventually can affect the corporate governance quality and will convert into high debt level. Anderson and Reeb (2003) documents that debt cost is usually low for large boards since creditors have a view of effective monitoring of these firms by a varied group of experts. So, financing by use of debt becomes a cost effective tool.

In case of Pakistan, Hasan and Butt (2009) explore the relation between capital structure and corporate governance of listed firms in Pakistan. The findings of study shows that board size and managers ownership have a significant negative relation with debt level. The results reveals that corporate governance variables i.e. the board size and managerial shareholding perform a significant role in determining the capital structure of companies. Based on previous empirical literature, we have developed the following hypothesis:

Hypothesis 2c: *Ceteris paribus, there is a significant relation between bidder firm's board size and % of cash payments to finance the deals.*

Financial Variables:

The bidder firm financial variables include the cash availability, collateral and leverage. Hansen (1987) advances a signaling model that foresees that high level of debt in bidding company cause the payment in form of stocks. Similarly, higher leverage ratio might disclose that an entity is not able to increase debt level and hence must use stock payments. Alternative option is that a high leverage level afore the merger might implies that the nature of company's assets back it or firm's management is inclined towards higher use of debt. Hence in case of high leverage in firm, the use of stock as a payment mode is low.

Other empirical studies [Martin (1996), Chang & Mais (2000), Gregory (2000), Faccio and Masulis (2005), Ben-Andre & Amar (2009)] explore the relationship between acquirer's financial position and the mode of payment in mergers and acquisition deals. Bidding firms having large sums of money i.e. cash accessibility are more expected to finance deals with cash. According to Martin (1996) & Gregory (2000) there is negative relationship between availability of cash and probability of stock financing. On the other hand, Martin (1996) and Chang and Mais (2000) don't document a significant relation between debt and probability of stock financing.

According to Faccio and Masulis (2005) borrowing ability of acquirer firm is related with debt ratio and fixed asset ratio. High levered acquirers might have problems in raising and using debt for financing M&A deals. So, high leveraged bidder firms will be inclined to use stock as a payment mode. The findings show a negative relationship between bidder's debt ratio and cash payments in European M&A deals. The results also show that bidder firms having high value of tangible assets would have an ability to use more debt to pay M&A deals. Ben-Andre & Amar (2009) examine the impact of bidder firm's availability of cash and collateral on mode of payment in mergers and acquisition deals, their results shows that positive relationship exists between bidding firm's collateral measured by firm's level of fixed assets and the use of cash as a payment mode.

According to Bruslerie (2011)**,** financial conditions variables (i.e. cash availability, collateral, leverage etc.) are not proved to be highly significant in the determination of mode of payment in a sample of 528 European Union merger deals over a period of 2000-2010. The financial variables include the limits on the leverage use and

control structure of the acquirer's shareholders. Generally, acquirer firms have inadequate level of current assets; so, cash financing require external funds.

The profitability of bidder firm also impact the payment mode choice in M&A deals. Higher profitability may reveal the capability of firm to take benefit of high tax shields from higher level of debt and depreciation and so leads to cash financed merger deals. While there exist other tax shields like operating loss carry forwards that are accessible to companies through stock exchange offerings, tax benefits usually will be higher if cash financing is used. Lower the profitability of bidding firm, the less it is expected that firm will get benefit from extra tax shields; hence, stock financing would be favored (Chaney *et.al.*, 1991).

Zhang (2003) examine the hypothesis that choice of mode of payment in mergers and acquisition depends on corporate financial characteristics and factors. The hypothesis is tested by using data on UK mergers and acquisition in the 1990s by employing univariate descriptive analysis, discriminant analysis and multinomial logistic regression. The results reveal that bidder firm's profitability is positively related to cash payments. The return on equity of bidder before the acquisition announcement that is an important determinant is negatively related to stock issue as a mode of payment. The higher the ROE of the bidder, the more likely firm is using cash in deal given cash is in hand.

Growth Opportunities hypothesis shows a positive relationship between a bidder firm's investment prospects and probability of payments in stock form [(Martin (1996), Chang and Mais (2000), Zhang (2003), Faccio and Masulis (2005), Ben-Andre and Amar (2009)] According to Martin (1996) bidding firms with high investment prospects tend to use stock financing in corporate mergers and acquisitions. Stock financing carries low possible restrictions, hence giving managers increased flexibility in their current and future financing and investment decisions.

The studies also show that better performance of bidder firm's stocks in market leads to adoption of stock issuance method (Zhang. 2003). Sundarsanam & Mahate (2003) show that glamour firms (i.e. high growth firms) probably more use equity payments than cash as their stock is overvalued. In both inter and intra group cases, value bidders use cash financing intensively as compared to glamour and average position bidders. The reason might be that the managers of value firms know their true status and don't want to issue the undervalued stock in order to circumvent dilution of control and retention of earnings for existing stockholders.

Faccio and Masulis (2005) document that high market to book ratio increases an acquirer stock's desirability as a M&A payment. Higher ratios of market to book value are also related with higher level of deductible tax research and development expenses, with low dividends and current earnings. These characteristics of firm decrease an acquirer's need for extra tax shield that lessens the cash attractiveness as a payment mode. According to Bruslerie (2011)**,** companies with high growth

prospects and higher stock valuation are more likely to stock financing in mergers and acquisitions.

Therefore, the review of previous empirical literature suggests bidder firm's cash availability, collateral, and leverage is used to capture financial variables impact and return on equity to capture profitability impact on payment mode in M&A deals and develop the following hypothesis.

Hypothesis 3a: *Ceteris paribus, the more cash availability with bidder firm's increases the likelihood of cash used to finance the deal.*

Hypothesis 3b: *Ceteris paribus, the more the bidder firm's collateral, more is probable to go for cash used to finance the deal.*

Hypothesis 3c: *Ceteris paribus, the more is bidder firm's leverage less likely it use cash to finance the deal.*

Hypothesis 3d: *Ceteris paribus, the more profitable bidder firms are more likely to choose cash financed deals.*

Hypothesis 3e: *Ceteris paribus, the more growth opportunities available to bidder firm, the less likely cash financing is used in merger and acquisition deals.*

2.2. Target Firm Characteristics

Previous literature also examines the characteristics of target firm such as relative size (substitute for risk sharing and asymmetry of information) and ownership structure etc. as possible determining factor in payment mode choice in mergers and acquisitions.

Information asymmetry hypothesis:

The significant part of mergers and acquisitions in corporate sector is the accessibility of complete information regarding target firm, especially in case of a public limited target firm. Hansen (1987) models the payment mode choice between target and bidder under information asymmetric condition. The acquiring firm use equity rather than cash as a payment mode in merger and acquisition deals, if target firm knows its value better than the acquirer and so compelling target to share in post-acquisition reassessment effects. According to Hansen (1987), problem of information asymmetry would be large as the size of target firm increases. So, if target firm is a significant addition to bidder firm, stock financing is more likely to be used in mergers.

Myers and Majluf (1984) document that stocks are issued in case of inside information access by bidder's management regarding overvaluation of firm's stock. Consequent empirical studies [Travlos (1987), Wansley *et.al.* (1987)] reveal that market responds negatively to seasoned equity issues but not respond to other types of financing. In the same way, managers are most probably to finance acquisitions with equity in case of critical private information. The findings of studies also reveal

that abnormal returns to investors in bidder companies are considerably negative in equity financed acquisitions, but are not negative in case of cash financing.

Zhang (2003) findings reveal that relative size of target is one of the important determining factors in payment mode choice characteristics of target firm. The greater the relative size of target, the more likely the stock offering is used to finance the mergers deal for UK M&As of 1990s. Consistent with information asymmetry hypothesis, Faccio and Masulis (2005), Martynova and Renneboog (2008) and Ben-Andre and Amar (2009) report a negative relationship within target's relative size and the % of cash payment in M&A deals. Bidding firm's financing decision regarding mergers are influenced by their strategic preferences for particular forms of payment mode. The risk sharing incentives of an equity offer increase with transaction's relative size, conversely, the use of stock financing decrease when there is a threat of control on bidder side. By reviewing previous literature, we develop the following hypothesis;

Hypothesis 5: *Ceteris paribus, larger the relative size of target firm the lesser is the probability of cash financing in merger and acquisition deals.*

Target Ownership Structure:
According to Faccio and Masulis (2005) stockholders in unlisted target firms are not concerned with an equity stake in acquirer firm because the sale of target firm's assets is limited due to liquidity problems and restructuring. Furthermore, ownership of private unlisted target or a company's unlisted subsidiary is usually highly concentrated. The results reveal that bidder firm's major stockholder might be averse to stock offers for an unlisted target acquisition because the risk of formation of a new block-holder in bidding firm which threat their controlling power. The results of study show a positive relation between acquisition of an unlisted target and the % of cash payments used in European M&A. According to Ben-Ander and Amar (2009), bidding firms buying unlisted targets are more probably to pay in form of cash. The following hypothesis is developed by reviewing previous empirical literature:

Hypothesis 6: *Ceteris paribus, the unlisted target firms are more likely to choose the mode of cash financing in merger and acquisition deals.*

3. METHODOLOGY AND DATA

3.1. Methodology

The study attempts to examine the determinants of choice of mode of payment in M&A decisions. Theoretical literature suggests that mode of payment in corporate mergers and acquisitions is influenced by the bidder and target firms characteristics, ownership structure and board of director's competition.

A higher level of debt increases the risk of bankruptcy, so management self-interests in long run stability of the firms might persuade them to decrease cash payments (including debt) to finance mergers and acquisitions. However managers control

motivation induce them to use cash rather than issuing stock to circumvent the dilution of ownership and control. Therefore it is hypothesized that there is significant relation between managerial ownership and % of cash payments depending on manager's motivation (i.e. risk reduction or control motivation). The risk reduction and control motivation hypothesis of managerial control explains the choice of payment mode in corporate M&As [Amihud *et.al. (*1990) and Yook *et.al. (*1999)]. There is non-linear relation between managers' ownership and the probability of stock issuance to finance M&A (Martin (1996). These hypothesis are tested for developing economy with concentrated ownership i.e. Pakistan.

Existence of institutional investors in a firm acts as an external monitoring device and helps to raise long-term financing at a reasonable cost. Institutions reduce the company's agency costs and also bring down managerial opportunism. The evidence regarding impact of institutional owners on payment mode in M&A is mixed.

The board of directors in a company is a corporate body at higher level that is accountable for firm management and its operations. It performs a significant role regarding capital structure decisions. So, it is considered an important variable to study the impact of corporate governance on payment choice in corporate mergers and acquisitions. The analysis also considers the corporate governance variable; board size, however, CEO duality and presence of independent directors are excluded from the analysis due to non-availability of complete data related to number of independent directors on board in firms involved in M&A deals.

In the mode of payment determinants model, the bidder and target firm characteristics are included. The variables are divided into three sections i.e. bidder firm corporate governance variables, bidder firm financial variables and target firm characteristics. The bidder corporate governance variables include the managerial ownership, institutional ownership, outside block-holder and number of board of directors. The bidder financial variables include cash availability ratio, collateral, leverage, market to book ratio and return on equity (ROE). The more growth opportunities available to bidding firm, the higher the chances of stock issuance to finance merger and acquisition deals. The target firm characteristics include its listing status and relative size. The literature regarding the information asymmetry hypothesis shows that higher the information asymmetry about target firm, the higher are the chances of stock financed deals in mergers and acquisition to share risk with target shareholders.

3.2. Empirical Specification of the Model

The empirical specification of the model is developed based on the insight taken from theoretical and empirical literature. The impact of bidder firm' ownership variables is examines on cash payment financing in M&A deals. In equation 3.1 the linear relation between managerial ownership and cash financing is considered following [Martin (1996), Chang and Mais (2000), Faccio and Masulis (2005), Ben-Andre and Amar (2009)].

$$CV_i = \beta_0 + \beta_t MO_i + \beta_2 OB_i + \beta_3 IO_i + \beta_4 BS_i + \varepsilon_i \quad (3.1)$$

Where *CV* is cash dummy variable which takes the value of 1 if the deal is financed entirely through cash and liabilities and zero if deal is financed through stock issuance, MO is managerial ownership, *BO* is block holder ownership, *IO* is institutional ownership and *BS* is board size. The βs are parameters and ε is random error term.

In order to examine the nonlinearity between managerial ownership and cash payment, the square and cube of managerial ownership is included in the equation 3.1 as suggested by [Martin (1996), Chang and Mais (2000), Faccio and Masulis (2005), Ben-Andre and Amar (2009)].

$$CV_i = \beta_0 + \beta_t MO_i + \beta_2 MO_i^2 + \beta_3 OB_i + \beta_4 IO_i + \beta_5 BS_i + \varepsilon_i \quad (3.1.1)$$

$$CV_i = \beta_0 + \beta_t MO_i + \beta_2 MO_i^2 + \beta_3 MO_i^3 + \beta_4 OB_i + \beta_5 IO_i + \beta_6 BS_i + \varepsilon_i \quad (3.1.2)$$

Where all the variables are same as in equation (3.1), the square and cube terms of managerial ownership is included.

In equation (3.2), the impact of bidder firm financial variables is tested on mode of payment in M&A deals following [Martin (1996), Chang and Mais (2000), Faccio and Masulis (2005), Ben-Andre and Amar (2009)].

$$CV_i = \beta_0 + \beta_t CR_i + \beta_2 COL_i + \beta_3 LEV_i + \beta_4 MB_i + \beta_5 ROE_i + \varepsilon_i \quad (3.2)$$

Where *CR* is cash availability, *COL* is Collateral, *LEV* is leverage, *MB* is is growth opportunities and *ROE* is return on equity.

The impact of target firm characteristics is separately examined on mode of payment in M&A deals following [Martin (1996), Chang and Mais (2000), Faccio and Masulis (2005), Ben-Andre and Amar (2009)].The target firm variables include relative size of target (*RS*) and target ownership structure (*TO*) for non-listed target firm.

$$CV_i = \beta_0 + \beta_t RS_i + \beta_2 TO_i + \varepsilon_i \quad (3.3)$$

Finally, the model is estimated by combining bidder firm ownership and financial variables in order to test the robustness of results and to check which variables remain significant in combined variables model estimation.

$$CV_i = \beta_0 + \beta_t MO_i + \beta_2 OB_i + \beta_3 IO_i + \beta_4 BS_i + \beta_5 CR_i + \beta_6 COL_i + \beta_7 LEV_i + \beta_8 MB_i + \beta_9 ROE_i + \varepsilon_i \quad (3.4)$$

Further the model is estimated by combining bidder and target firm variables to test the robustness of results.

$$CV_i = \beta_0 + \beta_t MO_i + \beta_2 OB_i + \beta_3 IO_i + \beta_4 BS_i + \beta_5 CR_i + \beta_6 COL_i + \beta_7 LEV_i + \beta_8 MB_i + \beta_9 ROE_i + \beta_{10} RS_i + \beta_{11} TO_i + \varepsilon_i \quad (3.5)$$

Where all the variables remains the same as above.

3.3. Estimation Technique

The estimation is done separately for the nonfinancial and financial sectors because of the fundamental differences between the structures of both sectors. The Logit model is used for estimation of results due to presence of discrete dependent dummy variable, taking on the value of 1, if the mergers and acquisition deal is financed through cash and 0 if it is financed through issuance of equity. Therefore, the logit model for the estimation of is more suitable due to absence of normality assumption of error term in the model.

3.4. Data and Sample

The data regarding mergers and acquisitions in Pakistan is obtained from Karachi stock exchange and competition commission of Pakistan. Initially there are 175 mergers and acquisitions events in financial, nonfinancial and non-banking financial institutions but the final sample includes 104 events (56 non-financial and 48 financial). The non-banking financial sector is excluded due non-availability of complete data of this sector. So, the sample includes the financial (banking) as well as the nonfinancial sector mergers and acquisitions for which data is available and a separate analysis is performed for both sectors. The selected sample meets the following selection criteria: 1) observations are from 2005 to 2015; 2) bidding companies are listed Pakistani companies; 3) there are complete deals and represents mergers and acquisitions of substantial interest; 4) companies with single and several M & A during this time period are also considered; 5) both the nonfinancial and financial sectors are included in the sample; 6) target firms are not necessarily publicly listed firms; 7) companies market data and annual reports are available.

The data regarding ownership and governance variable is collected from bidder firm's annual reports at end of financial year before M&A deals. The financial variables data is obtained from financial statements of bidder firm at end of year before the acquisition. The data regarding M&A deal amounts is collected from Karachi Stock Exchange (KSE) data portal, Competition Commission of Pakistan and annual reports of firms. The variables used in study are explained in the following section.

3.5. Variable Definition and Construction

Cash Dummy (CV):

Since, the sample include the transaction involving cash only and stock only financing and don't include the mixed financing transaction. So the dependent variable is a dummy which takes the value of 1 if the deal is financed entirely through cash and liabilities and zero if deal is financed through stock issuance.

Bidder firm variables:

Managerial Ownership (MO) is measured by the % of shares held by bidder firm's board of directors declared in firm's annual reports. The square and cube of managerial ownership variable is also included to potentially capture the impact of

dilution on bidder's inside block-holder, which may not be the same at high and low level of ownership. Regulation regarding stock markets in Pakistan requires the disclosure of ownership pattern and the details regarding the shareholders holding more than 10% of stock.

Institutional Share Holding (IO) is measured as shares percentage held by institutions as declared in annual reports' shareholding pattern section.

Outside Block-holder (OB) is measured as a dummy variable which takes the value of 1 if there exist an outside block holder (i.e. non managerial block-holder) and 0 otherwise. The block holder is a shareholder who holds at least 10% of shares in a company and the data is collected from annual reports of firms.

Board size (BS) Board size is measured as the number of member of board of directors.

Cash availability (CR):
In accordance with previous literature, cash availability is measured as the ratio of cash plus marketable securities to deal value at the end of the year before the mergers and acquisition deals. This ratio can also be measured by taking the ratio of cash plus marketable securities to total assets of firm at the end of the year before the mergers and acquisition deals.

Collateral (COL):
Collateral is measured as the ratio of firm's fixed assets to total assets at the end of year before the mergers and acquisition deals.

Leverage (LEV):
Leverage is measured as the ratio of long term debt to total assets at the end of the year before acquisition deals to capture the firm's financial strength (following Andre and Amar, 2009). A second measure of leverage is used in case of financial sector which is calculated by the ratio of total debt to total assets at the end of the year before the mergers and acquisition deals.

Growth Opportunities (MB):
The growth prospects of bidder firm are measured through market-to-book ratio that is measured as the ratio of market value of equity plus book value of debt to total assets (book value) at end of year prior to deal.

Profitability- Return on Equity (ROE) is used to measure firm's profitability and it is calculated by dividing a firm's net profit to market value of equity at end of fiscal year before mergers and acquisition deals.

Target Characteristics:
Relative Size of the target (RS) is measured as the ratio of deal value to acquirer market capitalization plus deal value prior to the merger and acquisition deals.

Target's Ownership Structure (TO) is measured by dummy variable to check the impact of target ownership structure on mode of payment and it takes the value of 1

if target firm is an unlisted subsidiary or a standalone entity not listed on any stock exchange and zero otherwise.

4. EMPIRICAL RESULTS AND DISCUSSION

The results regarding mode of payment in financial and non-financial sector mergers and acquisitions are presented and discussed. The analysis begins with the summary statistics of data.

4.1 Descriptive Statistics Analysis

Table 4.1 reports the descriptive statistics for both the nonfinancial as well as the financial sector. The mean, median and standard errors are reported for all the variables used in the study.

Table 4.1 Descriptive Statistics

	NON FINANCIAL SECTOR			FINANCIAL SECTOR			
	Mean	Median	Std. Dev	Mean	Median	Std. Dev	t-stat
CV	0.673	1	0.473	0.75	1	0.437	-0.856
MO	0.248	0.180	0.240	0.059	0.016	0.108	5.044***
OB	0.836	1	0.373	0.937	1	0.244	-1.600
IO	0.103	0.062	0.100	0.069	0.018	0.094	1.783*
BS	8.4	8	1.749	7.833	8	1.209	1.885*
CR	0.074	0.019	0.095	0.076	0.067	0.024	-0.172
COL	0.389	0.322	0.222	0.022	0.017	0.013	11.46***
LEV	0.233	0.138	0.237	0.336	0.363	0.097	-2.822***
MB	1.427	1.079	1.012	0.862	0.988	0.475	3.536***
ROE	0.073	0.106	0.613	0.001	0.014	0.170	0.786
SZ	16.17	16.18	1.418	18.69	18.15	1.299	-9.35*
RS	0.149	0.042	0.203	0.093	0.012	0.175	1.494
TO	0.655	1	0.479	0.229	0	0.425	4.732***

*Note: The *,**,*** represents level of significance at 10%, 5% and 1% respectively.*

The descriptive statistics shows that normality assumption of distribution is not hold because there are differences between mean and median values and distribution is skewed. The significance of difference between means of financial and non-financial sectors is also tested by using t-test for difference between means of two samples. The results of test shows that mean difference is significant in all cases between nonfinancial and financial sector except cash dummy, outside block holder, cash ratio, ROE and relative size. The significant differences between financial and nonfinancial sector mode of payment determinants suggests a separate analysis is done for both sectors.

4.2. Regression Results of Determinants of Payment Mode

The mode of payment determinants model is estimated by using the Logit model. The correlation matrix between explanatory variables indicates no problem of multicollinearity. The QML (Huber/White) test is used to correct the problem of hetroskedasticity and robust standard errors & covariance are reported in cases where there are significant differences in results.

Mode of Payment Determinants; Nonfinancial Sector

The results presented in Table 4.2 by using Logit model explain the factors that determine the mode of payment used in Pakistan mergers and acquisitions. In the first model (3.1), the impact of ownership variables on cash payment dummy is examined and a linear relation is considered between managerial ownership and the percent of cash used to finance the deal. As the large block-holders are not concerned about control dilution at very low and high levels of control, however over an intermediate level inside shareholders may lose control through new stock issuance as a mode of payment in M&A [Faccio and Masulis (2005)]. Therefore, in second and third part of model (3.1.1 &3.1.2), managerial ownership square (MO^2) and cube (MO^3) is included to test the nonlinear relation between inside ownership and mode of payment.

Table 4.2 Results of Determinant of Mode for Payment for Non-Financial Sector

	Model (3.1)			Model (3.1.1)			Model (3.1.2)		
Variables	Coefficient	z - stat	p-value	Coefficient	z - stat	p-value	Coefficient	z – stat	p-value
Intercept	-1.594 (3.591)	-0.444	0.657	-1.537 (3.657)	-0.420	0.674	-1.526 (3.626)	-0.423	0.674
MO	-4.019 (1.736)	-2.315	0.026**	-6.129 (4.593)	-1.334	0.182	-8.659 (9.691)	-0.893	0.372
MO^2				3.671 (6.164)	0.595	0.551	13.02 (30.49)	0.427	0.669
MO^3							-8.415 (25.85)	-0.325	0.745
OB	-3.099 (1.586)	-1.953	0.051**	-2.984 (1.551	-1.924	0.05***	-3.003 (1.603)	-1.873	0.06***
IO	7.357 (3.511)	2.095	0.036**	7.487 (3.457)	2.165	0.03**	7.976 (4.030)	1.979	0.048**
BS	0.669 (0.528)	1.266	0.205	0.661 (0.546)	1.210	0.226	0.664 (0.542)	1.225	0.221
LR stat	20.70			20.90			20.96		
Pr(LR stat)	0.00***			0.00***			0.00***		
McFadden R^2	0.30			0.30			0.30		

*Note: QML (Huber/white) Hetro robust standard errors are reported in parenthesis. *, **, *** represent level of significance at 10%, 5% and 1% respectively.*

The results of model (3.1) reported in Table 4.2 indicate a negative and significant relation between the managerial ownership and the cash payment. However, when a nonlinear relation is tested between these two variables, the results do not document a nonlinear association between managerial ownership level and the likelihood of cash payment. The results seem to imply that as managerial ownership increases, the managerial block-holders become more concerned about the risk reduction hypothesis i.e. to avoid increasing the firm's risk and the probability of the firm bankruptcy.

Managerial owned firms generally have undiversified investment portfolios because they put a large part of their money in a group of firms. Managerial owners and their heirs also hold executive positions in firm and represent the board of directors, so their human capital is closely linked to a particular group [Anderson and Reeb (2003), Ellul (2008)]. In context of Pakistan, managerial controlled firms are usually those whose majority stock is held by insiders or family owned firms (Cheema *et.al.* 2009). Managers owned firms are always against the risk of bankruptcy and therefore refrain from using high debts. The managers of risky firms have benefits to finance the deals of mergers and acquisition with equity to decrease their private risk through reduction in debt. Therefore, the hypothesis of risk reduction explores that bidder with high variance in return are more probably to finance deals with equity.

The negative linear relationship between managerial ownership and the probability of cash payment do not support previous empirical studies results [Amihud *et.al.* (1990), Yook *et.al.* (1999), Chang and Mais (2000)]. Most of these studies have been conducted in US and UK where exist the dispersion of ownership and most companies respect the 'one share, one vote' rule, whereas in Pakistan ownership is concentrated. It is also documented that in Pakistan, most commercial banks are conservative in their credit policies and prudential regulations described by State Bank of Pakistan (SBP) make it very difficult for banks to be aggressive in their credit policies. However, our findings supports the results of earlier studies [Friend & Lang (1988), Ellul (2008), Brailsford *et.al.* (2002)] which documents that inside owned firms use low debt when inside control is high enough to ensure complete control on firm. However, our results do not document a nonlinear association between managerial control and the cash payment in M&A.

The results of model (3.1) in Table 4.2 also show that outside block holder is negatively while institutional shareholdings is positively related with likelihood of cash payments and the results are proved to be significant. Previous research has mixed evidence regarding the relationship of these variables with mode of payment in mergers and acquisitions. The positive relation between institutional ownership and cash payments shows that institutional investors in a firm act as an external monitoring device and helps to raise long-term financing at a reasonable cost. Institutions reduce the company's agency costs and also bring down managerial opportunism and this result is consistent with earlier studies [Jensen (1991), Martin (1996)]. The negative significant relation of outside block-holder with cash payments is consistent with Short *et.al.* (2002) and implies that these investors are more concerned with the dilution of ownership of insiders in the firm rather than increased monitoring of firm by creditors (in case of cash payments). The positive relation between board size and cash payment is consistent with Wen *et.al.* (2002) who document a positive relation between capital structure and board size but not proves to be significant.

Consistent with previous research related to mergers and acquisitions, the findings of model (3.2) reported in Table 4.3 documents a negative relation between bidder's market to book ratio and the probability of cash financing that is consistent with the investment opportunities hypothesis. These results are in confirmation with the earlier studies [Martin (1996), Chang and Mais (2000), Faccio and Masulis (2005), Ben-Andre and Amar (2009)]. The results support the argument that bidder firms are more probably to issue equity as a payment mode when their stock is overvalued as compared to case of undervaluation and the firms with growth prospects are more likely to use stock financing because equity gives more discretion over funds as compared to use of debt. Debt also requires firms to pay out cash in interest form so they don't have cash available for investment in poor projects, so debt increases value of firm with poor investment prospects. However, the discretion related with stock financing is valuable for companies with good investment prospects [Myers and Majluf (1984), Jung *et.al.* (1995)].

In case of bidder firms' financial variables, a positive relation is found between a bidder cash availability and probability of cash payment. These results are consistent with Ben-Andre and Amar (2009) and shows that bidder firms having a lot of cash availability are more likely to finance their merger and acquisition deals with cash and the result is also proved to be. The result shows leverage of bidder is negatively and significantly related with the likelihood of cash payments and result is consistent with Faccio and Masulis (2005) finding a negative relationship between debt and cash payments in mergers. This reveals that high levered bidder firms have difficulties in raising debt and using proceeds for financing investments. Thus, high levered firms are more probably to use stock as a payment mode. The collateral has high correlation with leverage that causes problem of multicollinearity, so we exclude collateral from bidder firm's financial variables.

The Return on equity (ROE) has negative and significant coefficient indicating higher returns lead to higher earnings per share which leads to higher prices of firm's stocks. Therefore, profitable firms prefer to issue stock as compared to debt. There is a risk that earnings can be diluted by issuing more stock but this can be justified by our previous result which documents a negative relation between managerial owners and cash payments showing inside owners are more concerned with the risk of firm rather than dilution of their rights. This result is in contradiction with the prior research that documents a positive relation.

The results of model (3.3) presented in Table 4.3 shows that the mode of payment is also related to target features. In confirmation with the asymmetric information hypothesis (Hansen, 1987), the result indicates that bidding firms buying big targets are more probably to use equity in order to share overpayment risk with target firm shareholders. The target listing status has a significant influence on the payment mode in M&A.

The results are in confirmation with earlier studies [Faccio and Masulis (2005), Andre and Amar (2009)] and suggest that investors of unlisted targets are more

probably to use cash given the concentrated and illiquid portfolio holdings by target firms. Similarly companies selling their subsidiaries are motivated by financial concerns or their desire to reorganize towards firm's core competences, and this finding also reveals that acquirer may be hesitant to use equity in order to evade the creation of a block-holder which threat the bidder firm's control and private incentives related with it.

Table 4.3 Results of Determinant of Mode for Payment for Non-Financial Sector

	MODEL (3.1): Bidder Ownership			MODEL (3.2): Bidder Financial			MODEL (3.3): Target Side		
Variables	Coefficient	z – Stat	p-value	Coefficient	z – Stat	p-value	Coefficient	z - Stat	p-value
Intercept	-1.594 (3.591)	-0.444	0.657	2.692 (0.965)	2.789	0.005***	-0.056 (0.600)	-0.095	0.925
MO	-4.019 (1.736)	-2.315	0.020**						
OB	-3.098 (1.586)	-1.953	0.051**						
IO	7.357 (3.511)	2.095	0.036**						
BS	0.669 (0.528)	1.266	0.205						
CR				0.071 (0.052)	1.359	0.087*			
LEV				-4.400 (1.574)	-2.796	0.00***			
MB				-0.419 (0.319)	-1.313	0.094*			
ROE				-3.961 (1.833)	-2.161	0.013**			
TO							1.331 (0.653)	2.037	0.02***
RS							-0.206 (1.634)	-0.126	0.449
LR stat	20.70			16.14			5.14		
Pr(LR stat)	0.00***			0.00***			0.07***		
McFadden R^2	0.30			0.23			0.27		

*Note: QML (Huber/White) hetro robust standard errors are reported in parenthesis. *, **, *** represent level of significance at 10%, 5% and 1% respectively. Tests are one tailed in case of directional hypothesis. The collateral is removed from model due to its high correlation with leverage to avoid multicollinearity problem.*

To check the robustness of results, the combined estimation is done for both the bidder's financial and ownership variables into one model (model 3.4 in Table 4.4). The results of the model show that outside block holder, cash availability, leverage, market to book ratio and return on equity are significant but the managerial ownership and institutional ownership become insignificant. Since most of the

variables are significant in the extended model which proves the robustness of the results. The same model (model 3.5, Table 4.4) is estimated by including also target firm variables but results are same as obtained in the previous regression which also indicates the robustness

Table 4.4: Combined variables model estimation: Robustness Check

	Combined model estimation (3.4)			Combined model estimation (3.5)		
Variables	Coefficient	Stat-z	p-value	Coefficient	Stat-z	p-value
INTERCEPT	-1.608 (3.878)	-0.414	0.678	-2.076 (3.601)	-0.576	0.564
MO	-2.018 (2.308)	-0.874	0.382	-1.721 (2.548)	-0.675	0.499
OB	-3.235 (1.688)	-1.916	0.055***	-2.871 (1.662)	-1.728	0.084***
IO	6.992 (4.915)	1.423	0.155	7.411 (5.553)	1.335	0.182
BS	0.857 (0.605)	1.416	0.157	0.789 (0.554)	1.423	0.154
CR	0.131 (0.076)	1.721	0.043**	0.143 (0.098)	1.459	0.072*
LEV	-3.275 (2.011)	-1.629	0.052***	-3.305 (1.944)	-1.700	0.044**
MB	-0.617 (0.447)	-1.378	0.084***	-0.609 (0.402)	-1.514	0.065*
ROE	-4.170 (2.181)	-1.912	0.028**	-4.094 (2.387)	-1.715	0.043**
TO				0.457 (1.201)	0.380	0.352
RS				0.535 (0.279)	1.916**	0.004
LR stat	28.64			28.98		
Pr(LR stat)	0.000***			0.001***		
McFadden R^2	0.41			0.42		

*Note: QML (Huber/White) hetro robust standard errors are reported in parenthesis. *, **, *** represent level of significance at 10%, 5% and 1% respectively. Tests are one tailed in case of directional hypothesis.*

Mode of Payment Determinants: Financial Sector:

The same analysis is carried in financial sector mergers and acquisitions and the mode of payment determinants, but the results are different due to difference in the structure of financial verses non-financial firms. Table 4.5 (model 3.2) reports the results of the impact of bidder financial variables on the cash payments in M&A. The results show that cash availability and market to book ratio have a significant impact on cash payment. Cash ratio have a positive relation with cash payments and the results are consistent with the earlier studies [Faccio and Masulis (2005), Ben-Andre and Amar (2009)] which indicates that firms with more cash availability are more likely to use cash as a mode of payment. Market to book ratio shows a negative significant relation with cash payments in M&A. This result is also consistent with earlier studies [Faccio and Masulis (2005), Ben-Andre and Amar (2009)] which documents that firms with more growth opportunities are more likely to issue stock

to finance the investments in order to have more discretion on the amount and use of funds. The variables like collateral, leverage and return on equity have expected signs but they are not significant. Leverage is also insignificant because banks are in the business of collecting deposits (which form a large part of its debt) and issuing loans to individuals and companies out of them. So, an increase in leverage does not mean that banks are issuing equity to finance their corporate acquisitions.

Table 4.5 Results of Determinant of Mode for Payment for Financial Sector

	Model (3.1): Bidder ownership			Model (3.2): Bidder financial			Model (1.3): Target Side		
Variables	Coefficient	Stat-z	p-value	Coefficient	Stat-z	p-value	Coefficient	Stat-z	p-value
Constant	0.311 (3.627)	0.085	0.9318	10.02 (12.63)	0.7933	0.4276	1.717 (0.496)	3.459	0.00***
MO	-3.860 (4.858)	-0.795	0.426						
OB	1.0837 (1.606)	0.675	0.499						
IO	2.481 (4.689)	0.529	0.596						
BS	-0.016 (0.330)	-0.049	0.961						
CR				5.72 (2.83)	2.365	0.00***			
LEV				-4.875 (11.75)	-0.415	0.339			
MB				-8.778 (4.803)	-1.827	0.034**			
ROE				1.313 (2.757)	0.476	0.317			
TO							41.94 (0.683)	61.43	0.00***
RS							-9.762 (3.574)	-2.7317	0.00***
LT (STAT)	3.29			20.51			21.11		
Pr(LR)	0.5112			0.00***			0.00***		
McFadden R^2	0.06			0.38			0.39		

*Note: QML (Huber/White) hetro robust standard errors are reported in parenthesis. *, **, *** represent level of significance at 10%, 5% and 1% respectively. Tests are one tailed in case of directional hypothesis. The collateral is removed from model due to its insignificant impact on model.*

Table 4.5 (model 3.3) also report the impact of target characteristics on the mode of payment. The results show that relative size is negatively and significantly related with the likelihood of cash payment. This result is consistent with the earlier studies [Hansen (1987), Martin (1996), Faccio and Masulis (2005), Ben-Andre and Amar (2009)] and shows that the acquiring firm use stock rather than cash as a mode of payment in merger and acquisition deals, if the target knows its value better than the acquirer and thus forcing the target to share in any post acquisition revaluation

effects. The target listing status has a significant influence on the payment mode in M&A. The results are in confirmation with earlier studies [Faccio and Masulis (2005), Ben-Andre and Amar (2009)] and reveals that investors of unlisted targets are more probably to use cash given the concentrated and illiquid portfolio holdings by target firms.

Table 4.6: Combined variables estimation in case of Financial Sector Mode of Payment

		Combined model estimation (3.4)			Combined model estimation (3.5a)			Combined model estimation (3.5b)		
Variables	Expected sign	Coefficient	Stat-z	p-value	Coefficient	Stat-z	p-value	Coefficient	Stat-z	p-value
Constant		11.86 (13.88)	0.853	0.393	12.313 (15.54)	0.792	0.428	21.62 (16.00)	1.350	0.176
MO	+ /-	-0.403 (5.455)	-0.073	0.941						
OB	+ /-	9.055 (8.817)	1.027	0.304						
IO	+ /-	-0.963 (7.613)	-0.126	0.899						
BS	+ /-	-0.557 (0.535)	-1.041	0.297						
CR	+	60.82 (34.78)	1.748	0.040 **	68.10 (29.43)	2.344	0.009 **	96.22 (41.58)	2.313	0.010 **
LEV	-	-10.59 (18.62)	-0.568	0.284	-2.689 (13.79)	-0.195	0.422	-11.14 (14.89)	-0.748	0.227
MB	-	-9.771 (4.847)	-2.015	0.021 ***	-14.03 (5.381)	-2.606	0.005 ***	-14.90 (5.953)	-2.502	0.006 **
ROE	+	2.810 (3.341)	0.841	0.200	0.458 (2.821)	0.162	0.435	-1.998 (2.607)	-0.766	0.221
TO	+				44.86 (2.209)	20.31	0.000 *			
RS	-							-38.83 (14.95)	-2.5970	0.004 *
LR stat		26.43			28.50			37.60		
$Pr_{(LR\ stat)}$		0.000 ***			0.000 ***			0.000		
McFadden R^2		0.49			0.53			0.70		

*Note: QML (Huber/White) hetro robust standard errors are reported in parenthesis. *, **, *** represent level of significance at 10%, 5% and 1%. Tests are one tailed in case of directional hypothesis.*

The robustness of results is tested (Table 4.6, model 3.4 &3.5) by combining the bidder firms financial variables and target firm characteristics and re-estimate the results (The ownership variables are not included in model 3.5 due to their insignificant impact in case of financial sector). The results again show that cash ratio, non-listed target and market to book ratio have a significant impact on payment mode. These results imply the robustness of the estimates in the combined model estimation.

Overall, the results of the study show that bidder firm ownership variables have a significant impact on the mode of payment in nonfinancial sector of Pakistan. The managerial ownership has a negative and linear relation with cash payments, which validates the dominance of risk reduction hypothesis. However, the ownership and corporate governance variables don't have a significant impact on the cash payments in financial sector of Pakistan.

5. CONCLUSION AND IMPLICATIONS

The present study explores the role of bidder and target firm's characteristics, ownership and financial and corporate governance in the mode of payment choice in Pakistan M&A. The results of the study show that bidder firm ownership variables have a significant impact on the mode of payment in nonfinancial sector of Pakistan. The managerial ownership has a negative and linear relation with cash payments in M&A, which validates the dominance of risk reduction hypothesis. The results also imply the validation of outside monitoring hypothesis i.e. the institutional investors are concerned with increased leverage (part of cash payment) in firm and thus increasing the monitoring of firms by outside creditors. However, outside block-holders are not actively playing their role in monitoring of firms and don't have long term presence in the firm. The bidder firm financial variables are significant determinants of payment mode in M&A deals. The positive relation of non-listed target with payment mode implies that shareholders of unlisted targets are more probably to accept cash payments given the concentrated and illiquid portfolio holdings by target firms. This finding also reveals that acquirer may be hesitant to use equity in order to evade the creation of a block-holder which threat the bidder firm's control and private incentives related with it.

The same analysis is conducted in financial sector and the results show that ownership and corporate governance variables don't have a significant impact on the cash payments in the M&A. Corporate ownership structure in Pakistan reveals that the promoters and directors ownership share is quite limited, therefore the existence of major outside shareholders do not play a significant monitoring role in the firm. The results of the impact of bidder financial variables on the cash payments in M&A show that cash availability and market to book ratio have a significant impact on cash payments. The results of the impact of target characteristics on the mode of payment show that relative size is negatively while non-listed target is positively related with the likelihood of cash payment.

Since the M&A activity provides information about bidding firm's management quality, so it will guide the executives' compensation committee about managerial remunerations. This study has a practical importance in the sense that it guides the practitioners about the dominant payment mode which are used in different situations. It also guides about the behavior of outside block holder and institutional investor in firm, whether they are playing their role to monitor firm’s management or not.

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