

Impact of External Monitoring Mechanism on Deal Amounts in Corporate Mergers and Acquisitions: Evidence from Pakistan

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Abstract

The studies regarding the deal amount paid in mergers and acquisitions (M&As) become especially important, as reduction of profits in such deals might be due to large amounts paid in acquisitions. The methodology of this study is novel as it takes into account the external governance mechanism by considering both the institutional ownership and external block-holders along with bidder and targeted firm characteristics on deal prices involved in M&As in case of Pakistan during period of 2005-12. The results of study show the existence of external monitoring in form of institutional ownership in both sectors. The study proves that the aim of acquisitions is to achieve a big size instead of value maximization and the managers who exaggerated their confidence attempt to overemphasize their capability to handle the target company, which leads to high amounts paid to acquire target. The nonfinancial sector proves the absence of agency conflicts, however agency hypothesis is not proved significant in financial sector case. The financial sector result shows that cash financed deals are associated with lower price that depends on presence of asymmetric information about acquiring firm, as management (i.e. managers of firm) possess more information as compared to other stakeholders.

Keywords: Mergers & Acquisitions, Asymmetric Information, Governance Mechanism, Agency Conflict, Value Maximization

Introduction

Mergers & Acquisitions (M&As) characterize different initiatives by management of firms with quantifiable values to measure firms performance. A massive literature on consequent performance of M&As show that most of deals lead towards unsatisfactory post M&As performance. So, M&As are generally observed in frame of agency cost conflict (Shleifer & Vishny (1997); Erickson & Wang (1999)). For example, managers may pursue acquisition deals to diversify their unemployment risk (i.e. by leveling firm's profits), and not necessarily for shareholders' interests. On the other hand, these deals may be done to achieve big size. It would permit management to take incentives like increased recompense and prestige in post M&As era. However, in case of concentrated bidder's structure of ownership, the key M&As associated interest conflict among management and stockholders is exchanged with concerns on how majority shareholders expropriate small shareholders (La Porta et al., 2002).

Despite in the increase of a number of these M&As, revenues from these deals are still puzzling. On one side, studies conducted to examine bidder and target firm's abnormal profits have revealed varied results. Most of these studies reveal increasing abnormal profits for target and decreasing profits and insignificant results in case of bidder firm. On other side, studies examining the impact of M&As on efficiency and profitability of firms also proved indecisive. A number of studies discover that banks buying credit institutes surge their efficacy or market-to-book-value (Akhavain, Berger & Humphrey, (1997); Cyree, Wansley & Black, (2000)).

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Inside this framework, studies relate with amounts paid in M&As deals turn out to be specially important, as the decrease of returns in these deals might be owed to high prices paid, which can set the creditworthiness and constancy of the firm at risk. Indeed, 75 percent of hostile buyouts approved from 1985 not be successful because of high prices involved. It will lead to the fact that these deals declined from around 22 percent to fewer than 10 percent of total buyouts from 1987 to 1998 (Cuervo, 1999).

In Pakistan, the studies related to M&As have generally emphasized the financial segment and analyzed pre and post acquisitions performance. Afza & Yusuf (2011) analyzed the efficiency gains in banking sector mergers by using stochastic frontier approach and concluded that efficiency gains increased after M&A, however that efficiency gain is negligible in cost. Afza and Nazir (2012) also investigate the association between corporate governance variables and changes in operating performance in bidder firm related with M&A in Pakistan. According to existing literature, not any evidence of study is found that examined the influence of acquirer and target firm's features on deal amounts in Pakistan. Therefore, the current study is an effort to cover this research gap in corporate sector M&As in Pakistan.

The current study adds to literature in different ways, it consider the joint association between ownership structure, financial constraints, growth prospects, asymmetric information and the choice of financing mode in corporate sector mergers and acquisition. The study also used most available latest set of data and an extended model. Most of previous studies examine the impact of managerial ownership on deal prices but this study investigates the impact of acquirer firm's institutional ownership on deal prices to check whether they are playing active role in firm's management. *Independent outside block-holders*, especially, influence the upper management in corporate decisions and may threat to cast their vote to replace management in order to line up the manager's interest with the shareholders (Shleifer & Vishny (1986), Barclay & Holderness (1991)). The study also contributes to existing literature in the sense that it not only focuses the nonfinancial sector but also consider the financial sector, and separate analysis is done for both.

The study used the data set including events of M&As for a period of 2005-12. The bidder companies are listed public companies of the Pakistan and target entities includes both the registered and non-registered firms. The results regarding deal price determinants in both financial and nonfinancial segment shows that most of target and acquirer firm characteristics are proved to be significant as deal price determinants. The results show a significant inverse relation between existence of institutional owners and M&As prices. However, the relation between the outside block-holder and deal prices is not proved to be significant.

The rest of study is organized as follows. The second section deals with review of literature. Third section deals with the explanation of dependent and explanatory variables used in study. Fourth section deals with model development and research methodology. Section five focuses on study results and discussion and last section includes conclusion, limitation of study and identification of future research areas.

Literature Review

Previous academic research directed to analyze abnormal return of acquirer and target firm in M&As deals have showed mixed results. Numerous previous researches related with M&As have showed positive returns for target and negative or insignificant findings for acquirer firm. On the other hand, literature analyzing the profitability and efficiency impact of acquisition deals of concerning entities have verified indecisive too.

Shawky, Kilb & Staas (1996) examine the mergers premium involved in 320 bank acquisition deals sample done during a period of 1982-90. The results of study indicate that huge amounts are paid to acquire small firms, highly profitable firms, target with high leverage ratios, target in a different area than acquirer and transaction conducted through stock payments in place of cash payments.

A number of hypotheses are tested in this study, the following section deals with literature review and hypothesis development.

External Monitoring Hypothesis

Majority shareholders achieve their personal goals and expropriate minority shareholders through investing firm's resources particularly in case of weak investor protection or in case of exceeding voting rights against cash flow rights (Claessens et al. (2002); Cronqvist & Nilsson (2003)). Majority shareholders are capable to make corporate decisions like merger & acquisitions without substantial resistance from minorities. Majority shareholders are, therefore, expected to pay extra for acquisition deals that fulfill their personal goals.

Jensen (1991) states that active outside stockholders have incentives to carry out costly external monitoring and are useful for firms. Institutional investors and Blockholders are examples of potential active stockholders. According to Black (1992) institutional shareholders perform roles that are helpful to align management interests with those of shareholders. For example, outside blockholders and institutional shareholders are capable of assisting antitakeover movements, endorsing an appropriate managerial compensation system, reinforcing institution's view in board meetings and possibly assisting the board. Moreover, various institutional shareholders have direct connections with company's top management and therefore can influence the corporate deal's terms and conditions. For now, empirical evidence reveals that deals financed through stock generally reduce the acquirer firm's wealth, so in presence of active outside and institutional blockholders, the likelihood of stock financed acquisition deals would be little.

Though, managerial or inside shareholders are not only once with control motivations, outside blockholders relatively have also a large stake in firm's stock which motivate them to play active role in firm's affairs. However, active contribution of outside shareholders in firm's management and their monitoring role is limited as they don't have a longterm presence in firms. Tufano (1996) states that institutional investors (1) are diversified as they have substantial ownership in different firms (2) they don't play an active monitoring role in management of firms (3) they have same incentive arrangements as atomistic.

So, it is concluded that outside and institutional blockholders' control motivation may not be enough to play an effective role incorporate decisions of acquirer firm. Also, institutions are not going against management proposals of their corporate clients, because of business associations between institutional stockholders and corporate clients (Tufano, 1996).The empirical literature supports mixed results regarding the role of institutional shareholders and external blockholders in firm's strategic decisions, so the following hypothesis is developed.

Hypothesis: There exists a significant relationship between bidder firm's institutional ownership and deal prices, ceteris paribus.

Hypothesis: There exists a significant relationship between bidder firm's blockholders ownership and deal prices, ceteris paribus.

Hubris Hypothesis

The prices paid in acquisition deals are also affected by acquirer's hubris or agency conflicts. Introduced by Roll (1986), the hubris hypothesis means that managers that overstate self-possession and overemphasize their capacity to manage target firm, leads them to pay huge prices for targets.

Previous studies regarding deal premium determinants in acquisition deals shows that well managed acquirers are more likely to develop the management of target firm, so these firms are most likely to pay large amounts to acquire target firms in order to achieve a high value for firms engaged in acquisition deal. Since the management quality is not directly observed, certain proxies like profitability and growth of firms are used to test it. The findings of these studies showed the significance of the following acquirer's characteristics like return on assets (ROA) and growth of main deposits, as determinants of deal premiums (Cheng, Gup & Wall, 1989; Hakes, Brown & Rappaport, 1997). According to Moeller et al. (2004) large acquirer firms relatively pay huge amounts than small acquirers since larger firm's managers are most likely to be inclined towards hubris.

The return on assets (ROA) ratio is used as a proxy to test hubris hypothesis. Based on literature following hypothesis is developed.

Hypothesis: There exists a significant positive relationship between profitability of acquirer firm and deal prices.

Agency Hypothesis

Consistent with Jensen (1986), agency conflicts may also affect the acquisition deal prices. These types of conflicts arise when acquirer firm's management use their free cash flow to accept projects that produce insufficient profits for stockholders. Gondhalekar, Sant & Ferris (2004) contend that one consequence of agency conflict is that acquirers categorized by big free cash flows and a low market-to-book ratio will use more hostile acquisition tactics and pay huge amounts. By using linear regressions, they examine the impact of acquirer's investment opportunities and free cash flows separately on deal premiums. The findings show that cash flows directly affect prices, which leads to the notion that management decisions aid their personal interests occasionally. More, the bidder's investment prospects are negatively related with deal premiums.

On basis of previous literature, the following hypothesis is developed.

Hypothesis: There exists a significant positive relationship between cash ratio of acquirer firm and deal prices.

Hypothesis: There exists a significant negative relationship between acquirer firm's investment opportunities and deal prices.

Value Maximization/ Achievement of Big Size Hypothesis

There are two factors related to M&A deals that explain the attractiveness of target firm for bidder. *First*, payment of high prices to acquire target proposes that target firm value is greater for bidding institution than its original shareholders. This augmented value can be described through the likelihood that bidder increases the profitability of target either by economies of scale or through improved management quality. *Secondly*, bidder firm goal may be different from maximization of value of firm. In this instance, the objective of managers is to increase the institution size in order to attain personal incentives. This objective does not lead to value maximization, but to achieve directors' personal interests (Berger, Demsetz & Strahan, 1999).

One objective of the acquisition is to increase the size of institution. This objective, termed "too big to fail" is one of the motives of key banking sector mergers in 1990s, in Anglo Saxon literature, and it defends the payment of high prices for mega mergers and mergers between comparable firms. The desire to grow aggressively intended that more profitable and larger institutes are willing to pay huge amounts in M&A deals (Hakes, Brown & Rappaport, 1997; Kane, 2000).

Diaz & Azofra (2009) examine the determinants of premium paid in 81 financial sector M&As in European countries during period of 1994-2000. The acquirer firm characteristic that may affect premium in merger and acquisition deals comprises the payment potential and ability to improve the management of target firm that are significant only in a subsample of cooperative and sav-

ing banks and not in complete sample. The target firm features that make it attractive to a bidder include its % of stock, loans % or its return on equity. A huge product or geographical diversification that is achieved by M&As has been not considered by the bidding firms as a cause to defend the higher premium payments. Moreover, in a whole sample of merger deals, the findings of study state no evidence that shows mergers are done for achievement of management's personal interests. However, in a subsample of banks, the findings of study reveals that management involved in M&A transactions chase their personal interests.

Dionne, Haye & Bergeres (2010) analyze the information asymmetry influence on premium paid in acquisition deals. The findings of study show that informed acquirers, defined as firms having at least 5 percent of target firm's shares before the declaration of deal, pay less premiums as compared to acquirers without any important information. The uninformed bidding firms suffered from winner's curse i.e. either don't join in auction or withdraw earlier from it or win by paying large amounts. The findings also reveal that run up in target share price, trigger by rumors after acquisitions declaration, and cause the target firm revaluation by acquirers. Bidders are also prepared to pay large amounts for low performing targets because of the probability of high returns associated with these target firms. The target firm's size and its relative size are inversely related with premiums, which supports the integration cost theory that states acquirers prefer small target firms due to their less absorption costs. Also the bidder firms usually pay more to buy target in hostile takeover or public purchase offer.

Alexandridis et al. (2013) analyze empirically the relationship between deal size and premium payment in a sample of 3691 US public M&A deals declared during 1990-2007. The findings of study show that acquirer of big target firms significantly pay low premiums. The findings also show that investors perceive big deals as more uncertain because these deals ends in a more severe destruction of wealth for acquirers beside with sharp rise in uncertainty of acquirer return around the declaration of deals. The bidder firms acquiring big targets carry on to lose their value in long-term as compared to acquirer of small targets that create positive abnormal returns for their stockholders. The results of study are not in line with expected estimates that relate the big deals failure to risk of overpayment. Instead, it indicates that the intricacy of large deals make economic benefits doubtful in spite of evidence regarding the relation of M&A deals with low amounts.

Based on previous empirical literature, the relation between bidder size and target relative size with deal premium is mixed. The study uses size of bidder and relative size of target firm as a measure behind mergers motivation and develops following hypothesis.

Hypothesis: There exists a significant relationship between size of acquirer firm and deal prices.

Hypothesis: There exists a significant relationship between relative size of target and deal prices.

Financial Synergies and Overvaluation Hypothesis

Though, in spite of the ability of bidder to pay has not proved to be significant occasionally for premium determination, the payment means (cash or stock) has proved particularly significant conferring to two reasons: overvaluation hypothesis and financial synergies. *Firstly*, the relation between the payment form and premium can be described according to overvaluation hypothesis of Myers and Majluf (1984). This hypothesis depends on the presence of information asymmetry about the firm, as management of firm have more information than the rest of parties. Executives of bidding institute will prefer stock financed deals if they think their stock to be overvalued. Since the stock financed deals would be taken as a negative signal by market, which aware about asymmetric information, therefore the value of bidder' shares would decline. So the premium in stock financed deals should be higher than cash financed deals. *Second*, According to financial synergy hypothesis,

stock financed deals can offer greater financial synergies than cash financed deals, as the later indicates liquidity constraints. In this logic, prices paid are higher in stock financed deals (Beatty, Santomero & Smirlock, 1987; Shawky, Kilb & Staas, 1996; Hakes *et al.*, 1997).

On basis of previous literature, the following hypothesis is developed.

Hypothesis: There exists a significant relationship between payment mode and deal prices.

Since the acquisition prices not only depend on target firm characteristics, which based on its future value, but also on the acquirer firm's financial capacity. So, the present study considers the both i.e. characteristics of bidder and target firms.

Data and Sample Selection

Sample Selection

The data about M&A deals is acquired from Competition Commission of Pakistan and Karachi Stock Exchange. Initially there are 175 M&As deals (including nonfinancial, financial and non-banking financial institutes) but the ultimate sample includes 104 events i.e. 56 in nonfinancial and 48 in financial. Due to unavailability of complete set of data, the nonbanking financial segment is excluded. The remaining sample decrease due to inaccessibility of annual reports of the companies during required time period. So, the final sample includes the financial and nonfinancial sector M&As deals and a separate analysis is performed for both sectors.

The sample selected meets the following criteria: 1) bidder firms are registered Pakistani firms; 2) events are during the time period of 2005-2012; 3) the sample includes complete deals and characterizes M&As of significant interest; 4) firms with single and several M&As are considered during the time period; 5) both the nonfinancial and financial sectors are included in the sample; 6) target companies are not essentially publicly registered; 7) the required data related to final sample is completely available.

The data regarding ownership structure is available from shareholding section of acquirer company's annual reports before deal announcement. The financial constraints variables data is collected from bidder firm's annual financial statements before the deal announcement. The deal amount data is obtained from data portal section of Karachi Stock Exchange (KSE) and from Merger & Acquisition section of Competition Commission of Pakistan. The next section explains the variables used in study.

Data Analysis

Dependent variables: Deal Values (D_V):

The present study is conducted to analyze the deal price determinants in merger & acquisition deals. The dependent variable is defined as the natural log of deal prices paid in M&A.

Independent variables: Bidder firm variables

Institutional Share Holding (INST):

Institutional investors' presence in a company helps to raise long term funding at a reasonable cost and serves as a monitoring device. Institutions presence on board decreases the agency costs in firm and also reduces executive opportunism. Institutional ownership is measured through the percentage of shares held by institutional owners as stated in pattern of shareholding section of annual reports.

External Block-holder (EBH):

External block-holder is used as a dummy variable which takes the value of 1 if there exists an external block-holder (i.e. other than inside or managerial block holder) and 0 otherwise. The block-holder is an investor who holds more than 10 percent shares in a firm as stated in shareholding pattern section of annual reports.

Cash Availability (C_R):

Consistent with previous empirical literature, this variable is calculated as ratio of cash plus marketable securities to deal price at fiscal yearend before M&As deals.

Growth Opportunities (M_B):

The bidder firm growth opportunities are calculated through market to book ratio as a ratio of book value of debt plus market value of equity to total value of assets (book value) at fiscal yearend before deal.

Profitability; Return on Assets (ROA):

In current study return on assets (ROA) is used to calculate profitability of firm and it is measured through ratio of net profit to value of firm's total assets at fiscal yearend before M&A deals.

Firm Size (SIZE):

Big companies usually have close relations with creditors and find it easy to raise debt on favorable terms. The evidence regarding the impact of firm size on deal prices is mixed. The firm size is measured by taking natural log of total assets at fiscal yearend before deal announcements.

Cash Dummy (C_D):

The percentage of cash or debt to finance the deals is used as independent variable. It is a binary variable which can take the value of 1 or 0. So this is a dummy variable which takes the value of 1 for cash financed deals and zero in case of stock financed deals.

Target Firm Characteristics:***Target Relative Size (R_S):***

Prior empirical studies used target relative size to measure asymmetry of information. The target relative size is defined as ratio of deal value to acquirer market capitalization plus deal value before M&As deal announcement.

Target Ownership Structure (TLS):

Shareholders of unlisted target (private firm or an unregistered subsidiary of a public firm) may be reluctant to accept stock as a medium of payment due to liquidity reasons. Moreover, given the concentrated ownership of unlisted targets, bidding firm managers may not offer stock as a financing medium because of the possibility of formation of a new block holder in the new firm resulting from the merger. The target ownership structure is measured through dummy variable which takes the value of 1 if target firm is an impartial entity not registered on any stock exchange or an unregistered subsidiary and zero otherwise.

Methodology

The present study deals with deal amount determinants in merger and acquisition transactions. The variables used as predictors (independent) are those which are derived from earlier studies related to premium and prices paid in mergers and acquisitions (Diaz & Azofra, 2009; Dionne, Haye & Bergeres, 2010; Alexandridis et al., 2013 etc.). The characteristics of both the acquirer and target institutes are used to analyze deal price determinants in M&A deals. The characteristics of acquirer firm include availability of cash, market-to-book ratio, firm size and its profitability and acquired firm features include its relative size and listing status. The dummy variable used to measure mode of financing (i.e. equal to 1 for cash financed deals and 0 otherwise) is also used as a deal amounts determinant in merger and acquisition transactions. The details of independent and dependent variables have been given in data analysis part (i.e. third section).

The model for deal amount for bidder firm is estimated suggested by (Diaz & Azofra, 2009; Dionne, Haye & Bergeres, 2010) as follows:

$$Deal\ value_i = \beta_0 + \beta_1 INST_i + \beta_2 EBH_i + \beta_3 C_R_i + \beta_4 M_B_i + \beta_5 SIZE_i + \beta_6 ROA_i + \beta_7 C_D_i + u_i$$

The model for deal amount by including target firm's characteristics is estimated suggested by (Diaz & Azofra, 2009; Dionne, Haye & Bergeres, 2010) as follows:

$$deal\ value_i = \beta_0 + \beta_1 INST_i + \beta_2 EBH_i + \beta_3 C_R_i + \beta_4 M_B_i + \beta_5 SIZE_i + \beta_6 ROA_i + \beta_7 C_D_i + \beta_8 R_S_i + \beta_9 TLS_i + u_i$$

The methodology of this study is novel as it takes into account the external governance mechanism by considering both the institutional ownership and external block holders along with other bidder and target firm characteristics. It also considers the impact of payment mode (whether cash or stock financed deals) on deal amounts to investigate the presence of financial synergies and over-valuation hypothesis.

The ordinary least squares (OLS) method is used to estimate the determinants of deal amount for bidder and target firms and for test the significance of bidder and target firm's characteristics in analysis of deal price determinants. The white test is used to check the hetroskedasticity problem and hetro robust standard errors are reported in case of problem.

Results and Discussion

Descriptive Statistics Analysis

The descriptive statistics analysis is reported in table 1 for both the financial and nonfinancial segment. The statistics reported in analysis includes the mean, median and standard error for all variables used in study. These statistics reveal that assumption of normality does not hold i.e. distribution is skewed as there are variations in values of mean and median. The z-test is used to test the significance of difference between means of all variables used in study of both sectors, as size of sample is bigger than 30 in both cases.

Table 1: Descriptive Statistics Analysis

	NONFINANCIAL SECTOR			FINANCIAL SECTOR			Z-STAT
	MEAN	ME-DIAN	STD. DEV	MEAN	ME-DIAN	STD. DEV	
C_D	0.6727	1	0.4735	0.75	1	0.4376	-0.8598
EBH	0.8364	1	0.3734	0.9375	1	0.2446	-1.6628***
INST	0.1035	0.0619	0.1004	0.0691	0.0179	0.0939	1.7551***
C_R	10.51	0.7393	29.47	0.0762	0.0674	0.0235	2.6247*
M_B	1.4267	1.0798	1.0123	0.8624	0.9884	0.4747	3.6979*
ROA	0.0731	0.1062	0.6129	0.0012	0.014	0.1703	0.8360
SIZE	16.17	16.18	1.4181	18.69	18.15	1.2986	-9.41*
R_S	0.1495	0.0425	0.2035	0.0932	0.0123	0.1749	1.5134
TLS	0.6545	1	0.4799	0.2292	0	0.4247	4.7679*
D_V	12.57	12.43	1.9120	12.32	12.43	2.2384	0.6047

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

The z-test of difference between means reveals that mean difference, i.e. difference between two sectors mean, is proved to be significant in most of cases except deal dummy, board size, ROA, relative size and deal amount. The average value of institutional owners is high in nonfinancial sector case as compared to financial and mean difference between two sectors is significant too. On the

other side, mean values of outside block holder (other than inside or managerial) and cash ratio are high in financial sector. The mean values of market-to-book ratio and non-listed target are high in case of nonfinancial sector. The descriptive analysis shows significant differences between nonfinancial and financial segment deal price determinants, so a separate analysis is performed for both segments. The correlation matrix of variables used in study is inserted in the appendix, for both segments.

Regression analysis

Nonfinancial sector results

The results of deal amount determinants in M&A transactions are placed in table 2 & 3 for both the financial and nonfinancial sector. The bidder's institutional ownership is negatively related with deal prices, which shows that institutions are playing their monitoring role and prohibit the firm's management to overpay in order to attain their personal benefits by increasing firm's size instead of value maximization. The outside block-holder is not shown to have significant role in M&A related decisions.

The results show that the investment opportunities have a positive and cash ratio has a negative and significant relation with deal amounts in mergers and acquisitions. The findings regarding both variables show that there do not exist agency problems in nonfinancial segment, as agency conflicts also affect the acquisition deal prices. These types of conflicts arise when acquirer firm's management use their free cash flow to accept projects that produce insufficient profits for stockholders Jensen (1986). Another consequence of agency conflict is that acquirers categorized by big free cash flows and a low market-to-book ratio will use more hostile acquisition tactics and pay huge amounts, which leads to the notion that management decisions aid their own personal interests instead firm's stockholders occasionally (Gondhalekar, Sant & Ferris, 2004). But the present study suggests the contradictory result, i.e. the decline in agency problems in nonfinancial segment, which might be the result of an increased insiders ownership (i.e. executives & directors) that align the insiders interests with those of outside stockholders.

Alternative argument which explains the relation between deal amount involved in M&As and bidder's cash availability (cash ratio) is that because of asymmetric information, that prevail in stock financed deals in form of bidder's overvalued stock, the target firms prefer the payments in cash form. Thus, the preference of target firms against stock financing lead them to receive low prices in merger & acquisition transactions. Also the direct relation between bidder's market-to-book ratio and deal amount leads to the conclusion that acquirers with high opportunities of growth are more expected to prefer stock financed deals. As the presence of asymmetric information is high in stock financed deals, hence the prices are higher in case of high growth bidders as compared to bidders with low growth.

The results also show a significant positive relationship of deal amounts with both the target relative size and size of bidder. This finding supports the view that bidders are paying high prices in M&A deals if it has a big size, financially sound and able to bring a more effective & value creating administration in order to improve the management and operations of target firm. Also the acquirer's size and target's relative size rationalize the higher payments for target, when purpose of acquisition is the achievement of bigger size not the value maximization (Diaz & Azofra, 2009).

The significant negative relationship between profitability of firm and deal amounts reveals the existence of hubris. The amounts involved in M&A deals are also affected by acquirer's hubris that means the managers that exaggerate self-confidence attempt to overvalue their capability of managing the target, which justifies the higher payments for target firm (Roll, 1986; Hayward & Hambrick, 1997).

The significant negative relationship between non listed target and deal amounts implies that bidder pay less to acquire unregistered targets, because the formation costs of unlisted targets are less than registered target entities, so bidder pay low in case of unlisted target firms. The finding is also in confirmation with Isa & Lee (2011) in sense that bidders purchasing public firms are striving for their personal interests like a surge in their prestige and power, thus they are ready to overpay for publicly registered targets than private firms. The mode of payment dummy (1 for cash financed deals and 0 otherwise) is not proved to be significant in current analysis.

Table 2: Results of Bidder and Target Firm Model using OLS Estimation

Variables	Non-Financial Sector			Financial Sector		
	Coefficient	t-stat	p-value	Coefficient	t-stat	p-value
Intercept	0.0678	0.0316	0.9749	12.93	2.6199	0.0125*
INST	-2.7299	-1.7492	0.0869***	-6.1745	-2.0681	0.0453**
EBH	0.1965	-0.3129	0.7558			
C_R	-0.0072	-6.2518	0.0000*	15.352	1.1405	0.2611
M_B	0.4940	2.2584	0.0287**	-0.8040	-1.1806	0.2449
ROA	2.9386	1.8637	0.0688***	39.16	2.0456	0.0476**
SIZE	0.7228	6.2429	0.0000*	-0.0093	-0.0333	0.9736
R_S	5.5032	3.6093	0.0008*	7.0990	4.0732	0.0002*
TLS	-0.9002	-2.9575	0.0049*	0.1346	0.1819	0.8566
C_D	0.2906	0.9657	0.3392	-1.7505	-2.0137	0.0510**
F-stat	15.04			8.24		
Pb(F-stat)	0.0000*			0.0000*		
DW-stat	2.11			1.28		
Adjusted R2	0.70			0.55		

Note: The. *, **, *** represent significance level at 1 %, 5 % and 10 %. The errors are hetero adjusted standard robust errors.

Non-Financial Sector:

	White Heteroskedasticity Test:		
0.000117	Probability	132.6216	F-statistic
0.293829	Probability	55.96690	Obs*R-squared

Financial Sector:

	White Heteroskedasticity Test:		
0.529736	Probability	0.939671	F-statistic
0.473726	Probability	13.68115	Obs*R-squared

Results of Financial sector deal amounts determinants

The results of deal amount determinants in merger and acquisition transactions are presented in table 2 & 3 for financial sector. The bidder's institutional ownership is negatively related with deal prices, which shows that institutions are playing their monitoring role and prohibit the firm's management to overpay in order to attain their personal benefits by increasing firm's size instead of value maximization. The outside block-holder is not proved to have significant role in M&A related

decisions. The results also show that C_R is positively and M_B ratio is negatively associated with deal amounts in merger and acquisition transactions. However, the results are not significant in both cases.

Table 3: Results of Bidder Firm Model using OLS Estimation Technique

Variables	Non-Financial Sector			Financial Sector		
	Coefficient	t-stat	p-value	Coefficient	t-stat	p-value
Intercept	6.0243	2.42	0.019**	11.1069	2.10	0.042**
INST	-2.9365	-1.19	0.241	-8.099607	-2.21	0.033**
EBH	-0.6322	-0.72	0.477	.5217888	0.37	0.713
C_R	-0.0104	-8.08	0.000*	15.89533	1.19	0.242
M_B	0.4815	2.81	0.007*	-1.633867	-2.18	0.035**
ROA	1.5628	0.78	0.442	16.79547	0.74	0.462
	0.9632			.5376861		
SIZE		2.57	0.013*		0.78	0.438
C_D	-0.0936	-0.20	0.840	-3.919775	-5.03	0.000*
F-stat	5.9101			5.028		
Pb(F-stat)	0.0000*			0.0004*		
DW-stat	2.11			1.05		
Adjusted R2	0.38			0.37		

Note: The. *, **, *** represent significance level at 1 %, 5 % and 10 %. The errors are hetero adjusted standard robust errors.

The results also show a positive relation of deal amounts with both the target relative size and size of bidder, however the result is significant only in target's relative size case. This finding supports the view that bidders are paying high prices in M&A deals, when purpose of acquisition is the achievement of bigger size not the value maximization (Diaz & Azofra, 2009). This objective, titled as “too big to fail”, has been one of the key motives of most banking sector mergers in Anglo Saxon literature in 1990s and it defends the payment of high prices for mega mergers and mergers between comparable firms. The desire to grow aggressively intended that more profitable and larger institutes are willing to pay huge amounts in M&A deals (Kane, 2000; Hakes, Brown and Rappaport, 1997).

The significant negative relationship between profitability of bidder firm and deal amounts reveals the existence of hubris. The amounts involved in M&A deals are also effected by acquirer's hubris that means the managers that exaggerate self-confidence attempt to overvalue their capability of managing the target, which justifies the higher payments for target firm (Hayward and Hambrick, 1997). Our findings support this hypothesis in financial sector case too.

The results show a negative and significant relation between the C_D and the deal amount, which states that cash financed deals are linked with low acquisition prices. The significance of payment means (cash or stock) could be explained conferring to following hypothesis: overvaluation hypothesis and financial synergies. Firstly, the relation between the payment form and premium can be described according to overvaluation hypothesis of Myers and Majluf (1984). This hypothesis depends on the presence of information asymmetry about the firm, as management of firm have more info than the rest of parties. Executives of bidding institute will prefer stock financed deals if they think their stock to be overvalued. Since the stock financed deals would be taken as a negative

signal by market, which aware about asymmetric information, therefore the value of bidder' shares would decline. So the premium in stock financed deals should be higher than cash financed deals. According to financial synergy hypothesis, stock financed deals can offer greater financial synergies than cash financed deals, as the later indicates liquidity constraints. In this logic, prices paid are higher in stock financed deals (Beatty, Santomero & Smirlock, 1987; Shawky, Kilb & Staas, 1996; Hakes *et al.*, 1997).

Table 4: Nonfinancial Sector Correlation Matrix

	C_D	EBH	INST	C_R	M_B	ROA	SIZE	R_S	TLS	D_V
C_D	1	-0.20	0.32	0.18	-0.13	-0.19	0.22	-0.11	0.31	-0.03
EBH	-0.20	1	-0.05	0.13	0.11	0.09	0.05	-0.21	-0.22	-0.08
INST	0.32	-0.05	1	-0.17	-0.27	0.03	0.01	-0.06	-0.03	-0.19
C_R	0.18	0.13	-0.17	1	-0.03	-0.06	0.34	-0.25	0.21	-0.22
M_B	-0.13	0.11	-0.27	-0.03	1	-0.06	0.06	-0.02	0.09	0.33
ROA	-0.19	-0.09	0.03	-0.06	-0.06	1	-0.04	0.19	-0.18	0.10
SIZE	0.22	0.05	0.01	0.34	0.06	-0.04	1	-0.42	0.22	0.30
R_S	-0.11	-0.21	-0.06	-0.25	-0.02	0.19	-0.42	1	-0.31	0.42
TLS	0.31	-0.22	-0.03	0.21	0.09	-0.18	0.22	-0.31	1	-0.24
D_V	-0.03	-0.08	-0.19	-0.23	0.33	0.10	0.30	0.43	-0.24	1

Table 5: Financial Sector Correlation Matrix

	C_D	EBH	INST	C_R	M_B	ROA	SIZE	R_S	TLS	D_V
C_D	1	0.25	0.02	0.15	-0.43	0.25	0.34	-0.59	0.31	-0.37
EBH	0.25	1	0.07	0.09	0.05	-0.01	0.09	0.03	0.14	-0.09
INST	0.02	0.07	1	0.25	0.19	0.11	0.24	-0.13	-0.24	-0.12
C_R	0.15	0.09	0.25	1	0.40	0.45	0.44	-0.30	0.46	-0.05
M_B	-0.43	0.05	0.19	0.40	1	-0.01	0.28	0.01	0.14	0.07
ROA	0.25	-0.01	0.11	0.45	-0.01	1	0.61	-0.36	0.31	0.06
SIZE	0.34	0.09	0.24	0.44	0.28	0.61	1	-0.32	0.45	0.04
R_S	-0.59	0.03	-0.13	-0.30	0.01	-0.36	-0.32	1	-0.17	0.66
TLS	0.31	0.14	-0.24	0.46	0.14	0.31	0.45	-0.17	1	-0.03
D_V	-0.37	-0.09	-0.12	-0.05	0.07	0.06	0.04	0.66	-0.03	1

Conclusion

The studies regarding the amounts paid in mergers and acquisitions (M&As) deals become especially important, as reduction of proceeds in such deals might be due to large amounts paid in the acquisitions, which might put the stability and soundness of institutions at risk. However in case of Pakistan, the studies related to M&As have generally emphasized the financial segment and analyzed pre and post acquisitions performance. As per the available literature, this is the first study that explored the effect of target and acquirer firm's features on deal amounts paid in M&A in Pakistan. So, the current study adds to previous academic research by considering the joint association of ownership structure, financial constraints, growth prospects, asymmetric information and the choice

of financing mode on deal amounts in corporate sector M&As in Pakistan. The sample consists of events during 2005-12 and includes 104 events (56 in nonfinancial and 48 in financial sector).

The findings of study reveals that acquirer's institutions are playing their monitoring role and prohibit the firm's management to overpay in order to attain their personal benefits in both sectors. The outside block-holder is not proved to have significant role in M&A related decisions. The non-financial sector proves the absence of agency conflicts in case of nonfinancial sector, however financial sector don't proves the significance of agency hypothesis. The results of both sector also shows that mergers are done with aim of achievement of big size instead of value maximization. The amounts involved in M&A deals are also affected by acquirer's hubris that means the managers that exaggerate self-confidence attempt to overvalue their capability of managing the target, which justifies the higher payments for target firm (Hayward and Hambrick, 1997). Our findings support this hypothesis in financial sector case too.

The financial sector result shows that cash financed deals are associated with lower price and it can be described according to overvaluation hypothesis of Myers and Majluf (1984). This hypothesis depends on the presence of information asymmetry about the firm, as management of firm have more info than the rest of parties. Executives of bidding institute will prefer stock financed deals if they think their stock to be overvalued. Since the stock financed deals would be taken as a negative signal by market, which aware about asymmetric information, therefore the value of bidder' shares would decline. So the premium in stock financed deals should be higher than cash financed deals.

The present study results may guide corporate practitioners to avoid the deals that lead towards unsatisfactory post M&As performance. Some of the reasons behind poor post M&A performance include that managers may pursue acquisition deals to diversify their unemployment risk (i.e. by leveling firm's profits), and not necessarily for shareholders' interests. On the other hand, these deals may be done to achieve big size. It would permit management to take incentives like increased recompense and prestige in post M&As era.

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