Lessons in Forms of Merger Financing from India

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INTRODUCTION

The objective of this paper is to analyse the impact of the form of financing a merger on stock returns in the Indian context.This study focuses on mergers and acquisitions that are 100% stock or 100% cash between 2000 and 2011. In a merger or an acquisition the bidding corporation is laying claim on the future cash flows of the target corporation. The future cash flows of the target as currently valued are reflected in its price. The bidding corporation will bid if it can improve on the current valuation of the target and pay a price that will be lower than the aggregate of current value plus improvements on this value fromthe merger. The stockholders of the target corporation will receive payment that should be higher than the current valuation but less than the valuation arrived at by the bidding corporation. An all stock acquisition gives the target company stockholders the right to future free cash flows post-merger. These cash flows are risky and the risk return profile may not suit the investor portfolio and changes made to a portfolio would come with a cost. In an all cash merger, the stockholders of the target corporation receive cash for their share in the target company. This payment allows them to allocate their cash as per their risk return profile and therefore has greater value. For an all stock merger the bidding corporation is transferring some of the risk of their future free cash flows post-merger to the stockholders of the target company. Therefore, the merger has greater value for the bidding corporation. The results demonstrate this, and the form of merger financing affects the returns of the bidding and target firm.

LITERATURE REVIEW

Mergers and acquisitions is a part of corporate restructuring. When firms of about the same size, agree to go forward as a single new entity rather than remain separately owned and operated, then it is called a Merger. This kind of action is more precisely referred to as a "merger of equals." Both companies' stocks are surrendered and new company stock is issued in its place. There are two broad theories explaining why firms acquire other firms or merge with other firm. The monopoly theory postulates that the firms use the route MA to raise their market power (Steiner, 1975, Chatterjee, 1986),

whereas, according to the efficiency theory, MA are planned and executed to reduce costs by achieving scale economies (Porter, 1985; Shelton, 1988).

Empirical research on the division of stock market gains from mergers have been a mainstay of the financial economics literature for almost two decades [Jensen and Ruback (1983) and Jarrell, Brickley, and Netter (1988)]. While these studies have consistently documented that the target firms' shareholders realize large gains in successful merger bids, the results for bidding firms returns have been mixed. While most studies document small, statistically insignificant positive returns to bidding firms, Dodd (1980) and Malatesta (1983), find the bidding firms have small, statistically significant negative returns at the announcement of a merger bid. Bradley, Desai, and Kim (1988) also find that after passage of the William Act, bidders in tender offers lose. Jarrell, Brickley, and Netter (1988) summarize the findings on bidding firms as follows: "Acquirers, however, receive at best modest increases in their stock price, and winners of bidding contests suffer stock price declines as often as they do gains."

This does not differ substantially from Jensen and Ruback's (1983) earlier conclusion that "The evidence suggests, however, that returns to successful bidding firms in mergers are zero." These conclusions are disconcerting since they seemingly provide no profit maximization motivation for the management of bidding firms to pursue acquisitions. Roll (1986) hypothesizes those managers of bidding firms overpay for targets since they overestimate their ability to profitably run them. Asquith, Bruner and Mullins (1983) argue that the relative sizes of bidding and target firms may mask the gains to the bidding firm. The absolute gain associated with the acquisition of a small target firm by a large bidder may only produce a small abnormal return. For example, if the gain accruing to the bidding firm is 5% of the target firm's equity value and if the bidder's equity value is ten times that of the target only a 0.5% abnormal return will be observed. Testing for this they find that merger benefits, as measured by excess returns, are more observable when targets are large relative to bidders.

Various methods of financing a Mergers & Acquisitions deal exist-Payment by cash, Equity share Financing or exchange of shares, Debt and preference share financing, Deferred payment or earn- out plan, Leverage buy-out, Tender offer etc. Recent research shows that external financing affects firm values, and the impact differs according to the type of security issued (Smith (1986)) .Consequently, the form of merger financing may have an impact on the bidding firm's share price independent of the investment value of the merger.

Several studies have examined announcement returns in mergers by type of financing. Huang and Walkling (1986) find that target firms have significantly larger positive abnormal returns with cash mergers than with stock offers. Travlos (1987) investigates this issue for bidder firms and finds that stockholders earn significant abnormal losses at merger announcements if equity financing is used and abnormal returns insignificantly different from zero if cash is used. Franks, Harris, and Mayer (1988) investigate means of payment to both bidders and targets using monthly data and find that U.S. bidding firms suffer abnormal losses when using equity as the means of payment. The sample of merger bids is also divided into those initiated with a tender offer and those initiated other ways, e.g. merger offers negotiations, open market purchases, etc. Early empirical evidence (Jensen and Ruback (1983)) shows that while target firm shareholders receive large statistically significant gains regardless of the form of acquisition, bidding firm shareholders do not. The measured returns to bidding firms have been small and either insignificantly positive or significantly negative in merger bids, while the returns to bidding firms in successful tender offers have been small but significantly positive. Franks, Harris, and Mayer (1988) as well as Travlos (1987) show that this difference disappears in cash financed merger bids.

It is worth noting that there is an opposing hypothesis that suggests higher returns to targets in stock mergers. Risk arbitrageurs, investment specialists in the business of speculating on merger bids, experience no differential tax treatment on cash versus stock mergers. For reasons related to liquidity, transaction costs, and speed with which payment is received, they prefer cash mergers to those financed with common stock and other securities. As investors in the target firm, arbitrageurs require higher prices and thus, higher target returns for equity financed mergers to offset the cost and price risk implicit in the delay in receiving bidders' stock and to compensate them for the transactions cost and possible liquidity effects when they sell the shares received in the merger. If arbitrageurs are dominant among target shareholders, we should observe higher target returns for mergers financed with common stock and other securities and lower target returns for cash financed mergers.

METHODOLOGY AND RESULTS

This study analyses a sample of 60 completed mergers and acquisitions where both the target and bidding firms were listed on BSE or NSE at the time of the merger from 2000-2011.In the sample this study analyses 30 all cash deals and 30 deals are all stock. The event studies methodology was used to study the returns to the target and bidder firms around the announcement dates.

An event study analysis was carried out to calculate the cumulative average abnormal returns CAAR for each firm. The market model is estimated for each firm by the equation

$$R_{it} = a_i + b_i R_{mt} + e_{it},$$

where, t= -240, -239,……,-29, -30.

R_{it} = return on the i^{th} firm on day t,

R_{mt} = return on the market security on day t,

a_i, $b_{i,}$ = intercept and slope of the market model,

e_{it} = residual return on firm i at time t.

Firm return data were obtained from the BSE and NSE websites. For each firm involved in a merger, returns were obtained for 240 days prior to the announcement date up to 10 days after. The announcement date is defined as the day prior to the first publication of news of intentions. The market returns are approximated by the SENSEX and were also obtained for 240 days prior to and ten days after the announcement date for each firm. The slope coefficients for each firm were estimated by using daily returns beginning 240 days prior to the announcement date, and ending 30 days before the announcement date. Estimated intercept and slope coefficients of the market model were then used to calculate the abnormal returns for each firm. Abnormal returns for the twenty-day period surrounding the announcement date were computed for each firm according to the equation

$$AR_{it} = R_{it} - (\hat{a}_i + \hat{b}_i R_{mt})$$

where t = -10,-9,……,-1,0,1,……,9,10,

AR_{it} = abnormal return for the i^{th} firm on day t,

$\hat{a}$, $\hat{b}$, are estimated values of the intercept and slope coefficients a and b.

The average abnormal returns were calculated by dividing the total of the abnormal returns for all the firms by the number of firms (N).

$$AAR_t = \frac{\sum_i AR_t}{N},$$

t= -10,-9,…….,0,…….9,10.

The Cumulative Average Abnormal Returns or the Mean Cumulative Abnormal Return (CAAR) were then calculated by summing the abnormal returns for each firm.

$$CAAR = \sum_{i} AAR_t \ ,$$

where t = -10,-9,……..,-1,0,1,……..,9,10.

The results for the bidding firms are shown in Table 1:

TABLE 1

	All Stock	All Cash
Mean	0.706	-0.88
Variance	0.041	0.045
Observations	30	
Hypothesized Difference	0	
t- statistic	29.62	
p-value	0.000	

The t-statistic of 29.62 is greater than the critical two tail t-statistic of 2.00 with a p value of 0.004. Therefore, there is evidence that the return to bidders in an all stock takeover is positive and is significantly greater than the return to bidders in an all cash acquisition.

TABLE 2

	All Stock	All Cash
Mean	1.54	3.21
Variance	0.078	0.053
Observations	30	
Hypothesized Difference	0	
t- statistic	25.17	
p-value	0.000	

In the case of target companies the evidence is stronger that the returns to an all cash merger are greater than the returns to an all stock merger. The average mean abnormal returns to an all cash merger target at 3.21%, is greater than the return to a bidder both in all cash, as well as an all stock merger.

Data for stock plus cash bids was also analysed, however, the proportion of cash to stock is variable for this sample. Some firms have a greater proportion of cash while others have a greater proportion of stock in their bids. The results are given in Table 3 for bidding firms.

TABLE 3

	Greater proportion stock	Greater proportion cash
Mean	1.54	-1.85
Variance	0.031	0.082
Observations	30	
Hypothesized Difference	0	
t- statistic	55.23	
p-value	0.000	

The results of Table 3 reinforce the conclusion that bidding firm stocks that have a greater proportion of stock bids have significantly higher returns than firms that have a greater proportion of cash in their bids. However, the data for target firms is inconclusive in combination bids.

CONCLUSION

The results show that the returns to an all stock bidder are higher than the returns to an all cash bidder for the period 2000 -2011 in the Indian stock markets. Further, the returns to an all cash target are the highest of all and significantly more than the return to an all stock target. These conclusions are reinforced because we find that the returns to bidding firms that have a greater percentage of returns are higher than returns to bidding firms that have a greater percentage of cash.

The results support the fact that in a merger or an acquisition the bidding corporation is laying claim on the future cash flows of the target corporation. The future cash flows of the target as currently valued are reflected in its price. The bidding corporation will bid if it can improve on the current valuation of the target and pay a price that will be lower than the aggregate of current value plus improvements on this value from the merger. The stockholders of the target corporation will receive payment that should be higher than the current valuation but less than the valuation arrived at by the bidding corporation. An all stock acquisition gives the target company stockholders the right to future free cash flows post-merger. These cash flows are risky and the risk return profile may not suit the investor portfolio and changes made to a portfolio would come with a cost. In an all cash merger, the stockholders of the target corporation receive cash for their share in the target company. This payment allows them to allocate their cash as

per their risk return profile and therefore has greater value. For an all stock merger the bidding corporation is transferring some of the risk of their future free cash flows post-merger to the stockholders of the target company. Therefore, the merger has greater value for the bidding corporation. The results demonstrate this, and the form of merger financing affects the returns of the bidding and target firm.