A reflection of firm value, Capital Structure and Liquidity A case of Cement Sector in Pakistan

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Abstract

This effort aims at exploring the firm value (FV), liquidity, and leverage (LEV) while FV is considered the most significant variable for the long run sustainability of the firm. The 28 companies listed at Pakistan stock exchange (PSX) of the cement sector has chosen as sample of the study for a sample significant period of 10 years (2009-2018). After analyzing the data of the given variables through descriptive statistics, panel data regression, and correlation, it is concluded that there is positive significant relationship exists between ROA (Return on Assets) and LEV whereas contrary relationship is found between Liquidity Ratio and ROA. It is also observed that Liquidity Ratio has insignificant impact on ROA which means that timely satisfying the claims of the creditors has a minor impact on the firm value while leverage shows positive impact on firm value as compare to the impact of liquidity on the FV. The study suggested that the cement firms should take long term soft debts in order to coup up their mega orders due to mass level construction in Pakistan as well as in Afghanistan, which will increase their firm value.

Keywords: firm value, capital structure (cs), liquidity, PSX,

Introduction

Background of the study

The modern thinking on capital structure can be traced back to the pioneering work performed by Modigliani and Miller (MM) in1958 and 1963 respectively. They expressed that, interest payments less taxes, FV and CS are directly associated but in a frictionless world, financial debt support is unconnected to FV, whereas in year 1977, Miller added the personal taxes in analysis and concluded that the most favorable use of debt is in circulation on a large-scale, but at the firm level it is not the same. Similarly, the deduction of interest with in the firm is compensating at the level of investor. Furthermore, the MM (1963) has developed 2 propositions based on the condition of efficient equity market. Where one declares that the firm value is self-regulating of its debt equity proportion while the other proposal stated that there is a parallel status in terms of cost of ownership claim for a debt supported

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firm and non-debt supported firm along with an additional premium for the expected financial risk. on the other hand, various theories, in this regard, like the trade –off theory (Myers,1984), pecking order theory (Myers and Majluf,1984) and agency cost theory (Jensen and Meckling, 1976) insisted that in a perfect market situation, if capital structure decision is extraneous, then, limitation that has existence in the actual world may be adduce for its relevance. Operating cash flows generate by the assets are generating operating cash flows and hence it will affect enduring firm liquidity (Soenen, 1993). Liquidity is a significant element in corporate capital structure due to the fact that it will dispose of the short-term debts in specific and long-term claims in general.

Almost every firm has the objective to maximize its value, that is, in other words known as stockholder's wealth while maximizing this long-term value, one must examine its capital structure decision keeping in view its impact on the firm value. This research study is covering the gap, that is, weather the decision regarding the debt equity proportionate of the firm affects its long run value. Further, this study is significant in terms of the cement sector that is chosen because during the sample period (2009-2018), a huge amount of cement has been exported by Pakistani cement companies to Afghanistan for their reconstruction and rehabilitation program while to fulfill such heavy orders the companies needed leverage in its CS to maximize their FV.

Objectives of the study

1) To check the relationship between Leverage and firm value.
2) To check the relationship between Liquidity and Firm Value.

Literature Review

According to Hatfield, Cheng and Davidson, (1994), a very commonly observed debate has focused on two important aspects of capital structure, that is, on one side see that do an individual firm has most favorable CS, or on the other end the firm value is may or may not affected by the level of leverage in the given capital structure. The suitability of the CS verdict of a firm should be scrutinized in terms of its influence on FV. Similarly, additionally indicated that if the CS decision has the ability to influence FV, then firms will like to opt for such a CS which multiplies their long run value. The central point of attraction of a firm is to boost their shareholders wealth with the help of CS decisions. Nonetheless, there are some theories which are disagreed on the association between CS and FV that it categorized into some wide groups. For instance, Harris and Raviv (1991) well thought-out their investigation of literature in the order of those forces

which are backing behind are the financial policy and CS. The bases of their classification were on taxes, bankruptcy cost, agency cost, information asymmetry, interaction with input/or product and corporate control considerations. Similarly, a different approach picked by Sanders (1998), and theories of classified CS in light of whether exacting theory assumes the occurrence of best possible financial plan and how it describes by the theory. Furthermore, as per the findings of Nosa & Ose (2010), there is a negative relationship between capital structure and performance by examining this relationship for a sample period of 15 years. The study of (Ali, Alam, Akram,Rehman ,2011) explored a direct association between total obligations to total assets and profitability while an inverse association is found in between cash conversion cycle and return on assets of Pakistani firms. Similarly, (Anup & Suman, 2010), examined a positive significant association in between CS and FV by observing the sample firms over the period of 10years.

Furthermore, in the same line of action in this area of interest, model suggested by Ross (1977), that is, with usage of leverage, the values of firms would jump up, since increasing the market's insight of value. Besides, the above, other pragmatic proof on the trade-off theory (e.g., Bradley, Jarrell, and Kim, 1984) holds diverse findings. However, on the same side of the coin, many research studies evaluating CS shape in response to alter in corporate tax disclosure (Givoly et al., and Trezevant, 1992; Mackie-Mason, 1990) give a fact that supports the trade-off theory. Myers (1984) concluded that the trade-off theory is not successful in predicting the mass level change in observing cross-sectional and time in terms of debt ratios. Stock returns raises in response to any declaration of exchange offers by the issuers. on the whole, 55% of the discrepancy in stock announcement duration returns is discribed (Masulis, 1983). The value of the firm does not affect by CS in some circumstances. A company can directly maximize its value by dividing a capital into a mixture of ownership claim connecting to debt, dividend payment and equidity (Gemmille, 2001). Similarly, another debatable issue is financial structure effects economic development or not. A noteworthy effect of financial arrangement on actual per capita output was found, that is totally contrary to the results of (Arestis and Luintel, 2004). In order to complete the projects timely, many firms frequently hires the services of the external organizations, that is not only manage their activities and commitments but this sometimes results to less operating cost and jump up the profit earning of the organization. (Frazier, Jiang&Prater,2006). Similarly, as per the suggestion of the (Kochhar, 1997), if firms do not take on appropriate

governance hierarchy in their dealings with latent funds providers, so they may face the music in the shape of increased costs and dwindle performance. Further, another fact in this context is the "customer-driven" financial distress where firm has poor financial status as result of prices turn down in the output of the firm. On the other hand, "Employee driven" financial distress introduced from loss of insubstantial assets when firm revenue turns down. The pecking order theory (Myers and Majluf, 1984) while assuming information asymmetry, predicts that firm will pursue the pecking order as best possible financing approach. This theory is based on the fact that if the manager acts for the benefit of the owners, then, will issue securities at a higher price than that of the true value. Further, maximum sensitivity of the security will bear the higher the cost of equity capital, and this act of the concerned is an indication to the market that the security is over and above their original price.

Hypotheses of the study

The study has the following hypotheses to be tested

H1: There is significant relationship between leverage and firm value.

H2: There is significant relationship between Liquidity and FV.

Research Methodology

This section of the study is consisting of the following sub sections:

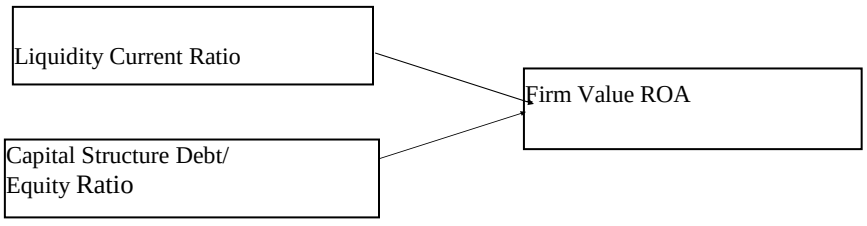
Nature of the study

The study is quantitative in its nature because of the fact that the data has been taken from the published stuff available at web sites of the sample cement firms, yahoo finance, business recorder, and official web site of PSX.

Population and sample size

All the firms of the cement sector that are listed at PSX is the population of the current study whereas through convenient sampling, the study has picked all the 28 firms as sample whose data were available

Theoretical Framework



Operational Definitions of the Variables

Return on assets (ROA)

In this study Return on Asset (ROA) is taken as a proxy to measure the firm value that is the dependent variable of the study. This shows the efficiency of management in utilizing their assets while ROA is simply the ratio of net income generated after clearing the claims of the outsiders divided by total assets including non-current and current assets. Further, this ratio is an indicator of proportionate volume of net income with respect to size of total assets utilized in operations in order to generate that amount of net profit for a specified period of time. Many of the previously conducted research studies such as the study of Nosa & Ose (2010), Ali, Alam, Akram, Rehman ,2011, have adopted ROA to measure the performance of the firms

RETURN ON ASSETS = NET INCOME / TOTAL ASSETS

Liquidity

Current Ratio

Liquidity is the explanatory variable of the study and it is measured through the proxy of current ratio (CR). It is commonly used measure of the liquidity which is easy to understand and convenient in application. It is a ratio of total current assets to total current liabilities whereas current assets include those assets which are utilized in business within one year and current liabilities are claims of the outsiders on business that are met by the business in one accounting period. The higher the current ratio the more ability of the firm to satisfy its short-term claims of their creditors. Previously conducted research studies such as the study of Spiegel and Spulber, (1997), Kochhar, 1997, adopted Current ratio as a measure of the liquidity.

CURRENT RATIO = CURRENT ASSETS / CURRENT LIABILITIES

Leverage

Leverage represents the total debts of the firm against total equity stocks issued by the firm. It is an important ratio in terms of disclosing both the key pillars of the capital structure of a company. Total debts show the proportion of those financers who lent the firm against holding debt securities such as bonds, debentures, and other financial assets. Similarly, equity portion of the capital structure is an indicator of the equity holders. A reasonable leverage ratio can play a vital role in the smooth operations of the business because it maintains a balance between total debts and total equity. The studies conducted by McConnel and Servaes, (1995), Ebaid (2009), Givoly et al., 1992;

Mackie-Mason, 1990; Trezevant, 1992) has considered leverage in their analysis.

DEBT /EQUITY RATIO= TOTAL DEBTS/ TOTAL EQUITY

Results and Discussion

Table No.1 indicates the findings of descriptive statistics for the variables in the study.

Table 1: Descriptive statistics for the variables in the study.

	N	Minimum	Maximum	Mean	**Std.** Deviation
LEV	150	-0.519	0.704	0.259	0.160
ROA	150	-0.975	3.64	0.120	0.464
Liquidity	150	5.87e+003	3.21e+004	5.87e+003	7.73e+003

This research has 150 observations with indication that ROA falls between -0.975 & 3.64 and mean value is 0.120 and deviation stood at 0.464. The case of Leverage falls in between the values -0.519 & 0.704 having a Mean 0.259& Standard Deviation of 0.160. In the case of Liquidity which falls between the values 5.87e+003 to 3.21e+004 with a Mean & Standard Deviation 5.87e+003, 7.73e+003 respectively.

Table 2: Correlation analysis

	ROA	LEV	Liquidity
ROA	1		
LEV	0.1282**	1	
Liquidity	-0.0875	0.2023	1

** Significance level of correlation is 0.01 (2-tailed).

* Significance level of correlation is 0.05 (2-tailed).

From the above table 2 it is clear that there is positive and significant association between ROA and LEV, which shows that the results are in line with the Ross (1977), concluded that the usage of leverage, the values of firms would jump up, since increasing the market's insight of value. Similarly, Leland and Pyle (1977) proposed that management would opt for a proportionate debt to equity ratio as indicator, keeping in view the ground reality that higher the debt support more chance of the risk of insolvency (and expenditure) for firms having sub slandered products. The above table further explains and shows that the relationship between Liquidity Ratio and Return on Assets (ROA) is

negative and insignificant. This result is also in agreement with the findings of Nosa & Ose (2010), that indicates a negative relationship between capital structure and performance by examining this relationship for a sample period of 15 years.

Table 3: Regression Analysis

	ROA	
Variable	Model	
	ß	t value
LEV	0.440944	2.827
Liquidity	−7.09314e-06	−0.421
R^2	0.29854	
F. Statistic	4.814	

The table above clearly indicates that Liquidity Ratio has an insignificant impact on ROA which means that timely satisfying the claims of the creditors has a minor impact on the firm value. The study of (Ali, Alam, Akram, Rehman ,2011) explored negative relationship between liquidity and (ROA) of Pakistani firms, that is, the results are in agreement with the results of the present study. Further, in table above, leverage shows positive impact on Firm value as compare to the impact of liquidity on the FV. This result is in line with the results of (Anup & Suman, 2010), who examined a positive significant relationship between capital structure and firm value by observing the sample firms over the period of 10years.

Conclusion

The study aims at exploring the performance of the sample firms in the cement sector of PSX against significant variables of the study such as capital structure and liquidity. For that very purpose, the target of the study was 28 cement companies listed on PSX while the study period was 10 years, that is, 2009-2018. This research has 150 annotations and indicated the range of ROA that falls in between -0.975 & 3.64 while the mean value stood at 0.120 and deviation from the average value is 0.464. Further, Leverage falls in between the values -0.519 & 0.704 with a Mean value of 0.259& Standard Deviation 0.160. whereas, Liquidity falls in between the values 5.87e+003 & 3.21e+004 with a Mean & Standard Deviation 5.87e+003, 7.73e+003 respectively. This study also declares that the relation of ROA and LEV is significant and positively related, whereas the association between Liquidity Ratio and ROA is negative and insignificant. It is suggested in this study that the cement firms should take long term soft debts in order to coup up their mega

orders due to mass level construction in Pakistan as well as in Afghanistan, which will increase their firm value. Because of higher demand of the cement in Pakistan, these firms may get high firm value, if they are successful in timely and efficiently meeting these heavy orders which will not only increase per share value of these cement firms but it can attract more financers in the form of creditors and equity holders. This study is limited to cement sector, but one can takes other sectors of the economy as well to get more authentic results. Similarly, variables of the study are also limited while one can conduct another study with different variables.

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