

The Cost of Capital and Firm Performance: An Empirical Evidence from Pakistan

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Abstract- This paper examines the effect of cost of capital on firm's performance for the capital market of Pakistan using latest data and new evidence. Firm's cost of capital is determined in the capital markets and is closely related to the degree of risk associated with new investments, existing assets, and the firm's capital structure. Firm's specific financing and weighted-average cost of capital (WACC) is essential for a good financial management. We use secondary data of 52 companies for the 11 years from 2010-2019. Firm performance is proxied by Return on Assets (ROA), Return on Equity (ROE), while cost of capital is proxied by Weighted Average Cost of Capital (WACC). Results show that firms in Pakistan rely on debt that generating internal sources of capital. The results of the study show that there is a significant negative association between cost of capital and firm performance. The study recommends the firms to achieve the best debt ratio with the minimum cost to maximize the firm performance. Also, the firms should rely less on short term debt which formed major part of their leverage and focus more on developing internal strategies that can improve their financial performance.

Keywords: Cost of Capital; Leverage; Firm Performance; Debt; Equity; ROA, ROE

I. INTRODUCTION

One of the central issues in corporate finance literature is the capital structure (CS) as an important investment decision. While Miller and Modigliani (1958) hypothetically argue that CS is irrelevant in a perfect market circumstances, characterized by the capital market with no taxes, no transaction costs and homogenous potential yet they consider the reality of corporate taxes as firms uses debt to the extent that can be achieved in order to maximize their value by maximizing the interest tax shield.

Capital structure decision is the mix of debt and equity that a company uses for investment (Damodaran, 2001). This decision is crucial because the business capitalizes on return for different investment to achieve a targeted value of the firm as well competitive edge its competitors. Many theories have explained CS in different ways such as tradeoff theory, pecking order theory, and the agency cost theory. Pecking order theory suggests that firms in the beginning rely on internally generated funds, and afterward they will turn to debt if additional funds are needed and finally, they will issue equity to cover any left over.

Myers and Majluf (1984) argue that firms that are beneficial and hence generate high earnings are expected to use less debt in their CS. Agency Theory suggests a mutual relationship between manager and owner. This relation is built up when shareholders appoint a manger and gives him responsibilities to make decision about the firm. Jensen and Meckling (1976) report that using greater level of debt may decrease performance of a firm. It predicts the advantages companies accomplish from using borrowing (saving of tax) are greater than the cost payable to the disagreement among manager-shareholder for debt. Consequently, this dissimilarity of agency cost of equity decreases by using borrows money (Parrino & Weisbach, 1999). CS comes with cost. There are many costs associated with it; however, this paper is restricted to the use of Cost of Capital (CoC), Cost of Debt and Cost of Equity. These terms are comprehensively explained in the following paras.

Cost of capital depends on the risk associate with the invested capital, and as an effect investor will ask a firm for the return which will offset the risk they gain (D'Schlegel, 2015). If the firm is financed by equity

and debt at the same time the Weighted Average Cost of Capital (WACC) is used because it exhibits the overall cost of capital of the firm by weighting the cost of using each source of capital, debt and equity (Britzelmaier et al., 2013). Due to various causes like distrust from customers, loss of credit availability from suppliers and inability to attract employees, a firm suffers. These costs require a u-shaped function of CoC with many level of debt-equity ratios equivalent to the present theories, and correlative to the present awareness of the CoC or WACC.

There are two benefits of debt for a company. The first one is tax shield; interest payments usually are not taxable for this reason the debt can enhance the value of a firm. Second advantage is that debt disciplines manager (Jensen, 1986). Managers use free cash flows of the business to finance a project to compensate dividend, or to hold-on cash balance. But the firm is not committed to some fixed payments such as interest expenses; manager could have incentives to “waste” excess free cash flows. It is argued that disadvantageous firms are less likely to depend on debt in their capital structure in comparison to profitable ones, and that firms with high growth rates have high debt to equity ratios (Akintoye et al., 2008).

Does it mean that a firm is needed to increase the debt fraction in its capital structure? If every increase in debt financing to increase the earning for the investors, then each firm would have been 100% debt financed. On the other hand, there is certain cost associated with debt financing. Thus, between the two boundaries of overall equity financing and debt financing, a particular debt-equity mix (optimal capital structure) is to be determined. Therefore, a financial leverage decision is needed to be calculated in such a way that it maximizes investors return and minimizes risk. In the same way as the value of a firm is directly related to its performance, financial expert’s study the correlation between leverage and firm performance in arrange to confirm Jensen’s (1986) theory. But empirical studies have not reached an agreement about the association between leverage and firms’ performance.

Modigliani (1980) points out that, the value of a firm is the sum of its debt and equity and this depends just on the income flow which generates by its assets. Pandey (2004) view the value of a firm is the sum of the values of every one of its securities. Particularly, the total equity and debt if a leverage firm and the value of its equity is an unleveraged firm. The firm’s equity is the cheap value of its shareholders pay called net income. In contrast, the value of debt is the discounted value of interest on debt.

Alternatively, another CS source of financing a project is equity and it also comes with a cost. The cost of equity determines the firm’s cost of equity financing for the firm or described as the probable rate of return to shareholder require for share firm’s common stock (Brealey, Myers, & Allen, 2010). The cost of equity relates to the risk of the company’s stocks. Here exist a number of methodologies to assess it: dividend discount model (DDM), Capital Asset Pricing Model (CAPM), weighted average of earlier period outcome of common stock or the left over value method.

Based on the above discussion and presumptions, this study has been designed to investigate the association of CoC with FP for firms listed on Pakistan Stock Exchange for the period 2009-2019. Firm performance is represented by Return on Asset (ROA), and Return on Equity (ROE) while Cost of capital is represented by weighted average cost of capital (WACC). Leverage and Firm Size are used as control variable. Using a data from 52 firms for the period 2009-2019, we find that FP is negatively associated with CoC confirming the above presumption that CoC is an important factor in determining the debt-equity association and thus on the returns of the firms in both for debt providers as well as equity providers.

II. LITERATURE REVIEW

Modigliani and Miller (1958) (M&M hereafter) first introduced Capital Structure Irrelevance Theory, advocated that firm value and weighted cost of capital (WACC) is unaffected by the financial structure of the firm. However, M&M’s perfect market assumption of no transaction costs, no taxes, symmetric information and identical borrowing rates, and risk free debt, are contradictory to the operations in the real world. Modigliani and Miller (1963) later modified their original M&M’s model and considered the tax deductibility of interest (tax shields effect). Modigliani and Miller (1963) demonstrate that when corporate tax allows the deductibility of interest payments, the market value of a firm is an increasing function of leverage.

Modigliani and Miller (1958) were the first to address the relationship between financial leverage (capital structure (CS)) with both capital value and firm value. Their intention was to evaluate that market price of the company is unbiased from its CS regardless of fluctuations in monetary leverage. They find that a negative association of CS with cost of capital (CoC), and that CS does not affect firm performance (FP). Nasir et al (2012) study the relationship between CoC and FP. They use return of assets (RoA) and return of equity (RoE) using 350 firms listed on Tehran Stock Exchange during the year 2006 to 2010. They find a significant positive relationship CoC and FP.

Abor (2005) examine the relationship between CS and profitability of listed firms on Ghana Stock Exchange and reports a positive relationship between short term debt to total assets and return on equity due to low interest rates. He reports that firms normally use short term financing and is a main portion of financing for them. He also finds a a negative relationship between long term financing and equity returns, and a positive relation between total debt and firm performance. He suggests that one of the reasons of these results could be the use of debt being considered a major source of financing for high profitable firms. Myers and Majluf (1984) argue that companies decide the sources of funding and their investment. Internal funding such as retained earnings is the first option and afterward if they still need external funding, companies will issue debt, before issuing equity. They argue that due to the costs of issuing debt or equity, companies may decline positive NPV. It points out that the value of their company could be improved by keeping enough internal funds in the firm so that it will not exceed positive NPV investments.

What causes the variations in the average cost of capital and the value of the business differentiates the two, someplace the tax benefit together with debt into the business's CS generates the positive outcome on firm value. Cost of capital make numerous impacts on interest payments and on the agency costs, which emerge from the free cash flows. Nevertheless, leveling risks of financial suffering and insolvency costs is caused by an increase in leverage. The payment from debt must analyze against the possible costs associated with the company's debt. The main consistent finding in the empirical CS research is that higher FP relates with lower leverage for a specified company. These studies conclude that higher profitability increases leverage to take advantage of a higher interest tax shield (Fama & French, 2002). Lopes and Alencar (2010) conclude that there is a negative and significant relationship between CoC and variables of growth opportunities and book value to market value ratio.

Weill (2008) examines the relationship between financial leverage and firm's performance in seven European countries. He finds that in Spain and Italy financial leverage is related significantly and positively with firms' performance, while significantly and negatively in France, Norway, Germany and Belgium, but insignificantly in Portugal. Li Meng et. al. (2008) investigate that financial leverage has a negative relation with FP measured by RoA, but has a positive relation with RoE.

According to Tudose (2012), the classical indicators used in financial analysis to measure performance have been the ROI, leverage, capital efficiency, liquidity, cash flow, inventory turnover, receivables turnover ratio. The choice of alternatives of ascertaining performance may be influenced by the firm's objective. The assessment of firm performance using financial indicators must be complemented by an assessment based on non-financial indicators that express the quality of management, corporate culture, the effectiveness of executive compensation policies, the quality of shareholder communication system, etc. Presently, there is a trend towards assessing performance based on value creation, subsumed under the goal of sustainable development.

A firm's performance can be measured in many different ways, depending on what the firm wishes to measure. Malm and Roslund (2013) state, you can measure the performance of individual divisions of the firm, or the overall performance of the firm. In this study we focus on the aggregate performance measurements for the entire firm. Therefore, the following theoretical framework has been proposed;

Theoretical Framework

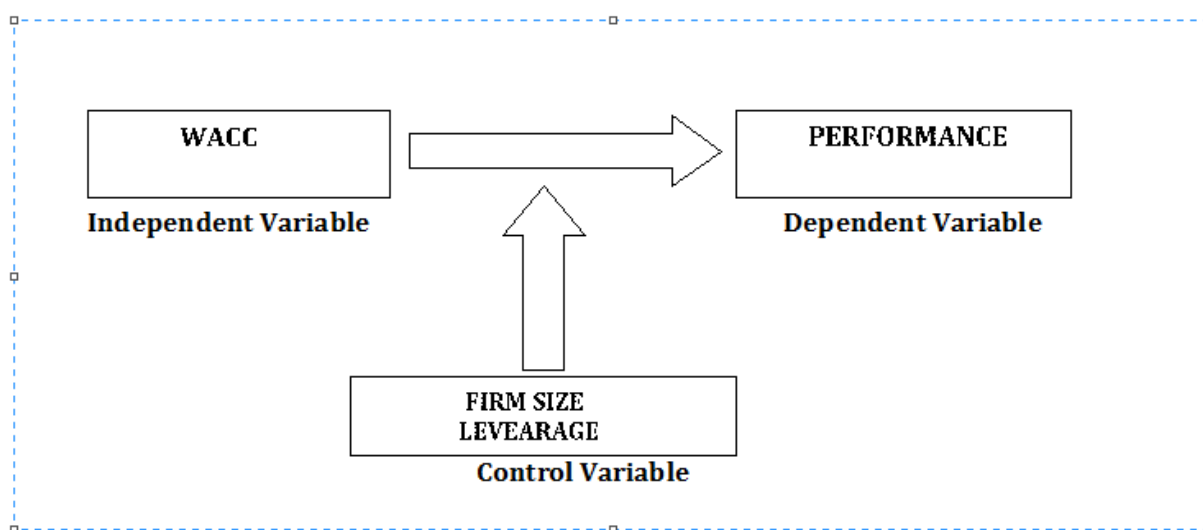


Figure 1

The above theoretical framework which represent CoC's association with FP. Firm performance is represented by Return on Asset (ROA), and Return on Equity (ROE) while Cost of capital is represented by weighted average cost of capital (WACC). Leverage and Firm Size are used as control variable. From the above theoretical framework, we infer that this study is an attempt to investigate the effect of CoC on FP from an empirical perspective from Pakistan Stock Exchange for the period of 2009 up to 2019. Therefore, the objective of the study is to examine the effect of cost of capital on firm performance of firms listed on Pakistan Stock Exchange.

III. RESEARCH METHODOLOGY

Sample of the Study

The firms selected are 52 for the sample period of 2009-2019. Thus, the total firm year observations are 520. Study is based on secondary sources. Most of the data has been gathered from the State Bank of Pakistan (SBP), Security and Exchange Commission of Pakistan (SECP), International Monetary Fund (IMF), Pakistan Stock Exchange website, Open Doors website and firms' website.

Data Analysis

This study uses descriptive statistics, correlation and regression analysis to investigate the main features of the data (mean, median, standard deviation, skewness and kurtosis etc), the association of all variables among each other (correlation) and the effects of independent variables on the dependent variables (how much independent variables affect the change in dependent variables). In order to study this effect, the following models have been proposed.

Model 1

$$ROA_{i,t} = \alpha + \beta_0 + \beta_1 WACC_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 LEVERAGE_{i,t} + \epsilon_i \quad (1)$$

RoA is return on assets; i is firm; t is time; WACC is weighted average cost of capital.

Model 2

$$ROE_{i,t} = \alpha + \beta_0 + \beta_1 WACC_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 LEVERAGE_{i,t} + \epsilon_i \quad (2)$$

RoE is return on equity; i is firm; t is time; WACC is weighted average cost of capital.

Variables of the study and its Measured

This study used return on assets (ROA) and return on equity (ROE) as the dependent variables, weighted average cost of capital (WACC) as the independent variable and of firm size (SIZE) and leverage as control variable. The variables are defined in the following.

Return on Assets (ROA)

Return on assets is return in assets and represents the amount of profit that can be made use of corporate assets. This ratio is measured from dividing net income after tax by book value of total assets (Lopes & Alencar, 2010; Chan et al., 2009).

$$ROA = \frac{EBIT}{TOTAL\ ASSETS}$$

RoA is a measure that is commonly used to measure the profitability of a firm's operations. As mentioned above, it also indicates the overall financial health of a firm. RoA is a good measure used to evaluate a firm's financial performance. In addition, it is a measure that has been used by many other researchers when evaluating the effect of capital structure on a firm's performance. It will therefore be used in our regression model as a measure of financial performance.

Return on Equity (ROE)

One of the most widely used accounting performance measures is return on equity ratio. This ratio shows how much return has been created from the funds invested by investors and also represent the real cost of use of invested funds (Osyani et al., 2012; Nasir et al., 2013). This is a pure measure of the efficiency of a company in generating returns from its equity, without being affected by management financing decisions. This study chose objective financial performance measures by adjusting the interest and tax to evaluate the performance of management objectively.

Return on equity is calculated from proportion of net Income after tax on book value of equity. Return on equity is calculated from proportion of net Income after tax on book value of equity.

$$ROE = \frac{NET\ INCOME}{TOTAL\ EQUITY}$$

Malm and Roslund (2013) state that the RoE can give an indication of whether a firm is able to find profitable investment opportunities, something that is of great importance for firms who want to stay competitive.

Weighted Average Cost of Capital (WACC)

Cost of capital consists of two components: cost of debt and cost of common equity. In this study, cost of capital used by the company is obtained from weighted average of these two components. Formula for calculating weighted average cost of capital (WACC) is as follows:

$$WACC = W_D \times K_D (1-T) + W_E \times K_E$$

Where WACC is weight average cost of capital; W_D is percentage of interest-bearing debt participation in total capital; W_E is percentage of common equity participation in total capital; K_D is Rate of interest-bearing debts cost before tax; K_E is Rate of common equity cost and T is Corporate tax rate.

Leverage

As a firm's leverage increases, the company is possible to find it more complex to endure periods of diminishing sales (Opler and Titman, 1994). According to Opler and Titman (1994), a reduced amount of leveraged companies get better market share to their highly leveraged corresponding items. This can be made clear as shareholders would not desire to be concerned with companies' financial distress. Also, it was argued by Opler and Titman (1994) that economically stronger companies mostly use these periods of business decline to overcome a better market share. They suggest that firms with high leverage and significant asset examine and have an increasing tendency to experience more and accept higher risk in financial system. As well Opler and Titman (1994) argue that leverage has a larger impact on a firm's survival. On the other hand, leverage (DEBT) may reduce a firm's cost of capital because it presents tax savings, interest payments being tax deductible. Alternatively, higher leverage is also related with higher risk (risk of insolvency) and, therefore higher cost of equity (Fama & French, 1992). Rajan and Zingales (1995) argue that the meaning of leverage rest generally on the aim of the study. Other events of leverage include debt to total assets, total liabilities to total assets, debt to net assets and debt to capitalization.

Firm Size (SIZE)

Size is represented by Market Capitalization. Market values are accurate firm values at an exact point in time and are favored over net asset values. Book value of assets is recorded at their historical costs and is not good proxies for a modern firm size. Earlier studies such as Sharma and Kesner (1996) strongly hold the effect of firm size on industry survival and disagreement in operating performance. They argue that it is a source of competitive benefit in the sense that better companies have a tendency to be more capable than their less significant comparable and have enhanced assets to survive economic recessions.

Data Analysis & Results

This section describes analysis of data and results derived from statistical analysis. For data analysis, both descriptive and inferential statistics are used. In descriptive statistics mean, median, standard deviation, Minimum, Maximum, Skewness, and kurtosis of each variable are presented. Inferential statistics, correlation is used to check association among the variables. Moreover, to investigate the effect of cost of capital on firm performance, this study estimates regression models as reported earlier in Section 3.

Descriptive Statistics

Table 1 shows descriptive statistics of firm performance which is represented by ROA, ROE. While CoC is represented by weighted average cost of capital (WACC). The selected sample is 52 firms and sample period is 2009-2019. The below table show mean, median, standard deviation, minimum, maximum, skewness, and kurtosis. These statistics showed that mean of ROA is 1.1105 of the total assets whereas the median of ROA is 1.0699. Standard deviation is 0.2362. These figures indicate firm value for divergence from mean to both sides by 0.2362. The minimum value of ROA is 0.7431. The maximum value of ROA is 3.9306 whereas the skewness of ROA is 1.34 and the kurtosis of ROA is 3.14.

Table 1 further indicated that mean of ROE was 3.1473 where as its standard deviation is 0.2343. These figures indicated firm value for divergence from mean to both sides by 0.2343. Whereas the median of ROE is 3.1398. The minimum value of ROE is 0.9390. The maximum value of ROE is 3.9786 whereas the skewness of ROE is -1.76 and the kurtosis of ROE is 19.98.

Table 1 Descriptive Statistics: ROA, ROE, WACC, Leverage, Firm Size,

The table presents descriptive statistics of the dependent variable and independent variables. RoA and RoE are firm performance proxies where RoA is measured as net income over total assets; RoE is net income over total equity while the independent variable is Cost of Capital and is taken as WACC. The control variables are leverage and firm size. The total sample size is 520 firm-year observations for the period 2005-2014.

Variable	Mean	StDev	Mini	Median	Max	Skewness	Kurtosis
ROA	1.110	0.236	0.7431	1.069	3.9306	1.34	3.14
ROE	3.147	0.234	0.939	3.139	3.978	-1.76	1.98
WACC	0.117	0.173	-0.702	0.038	0.896	1.32	2.14
Firm Size	7.659	1.237	4.505	7.243	10.969	0.56	-0.78
Leverage	0.347	0.978	-8.870	0.498	2.892	-1.14	3.24

Mean of leverage is 0.347, Median of leverage is 0.498. Standard deviation is 0.978. The minimum value of leverage is -8.870 while maximum value of leverage is 2.892 whereas the skewness of leverage is -1.14 and the kurtosis of leverage is 3.24. we also can see that mean of size is 7.658 whereas its standard deviation is 1.236. The minimum value of firm size is 4.505 whereas the median of firm size is 7.242. The maximum value of firm size is 10.969. Skewness of firm size is 0.56 and the kurtosis of firm size is -0.78 that shows that the data tend to be normal. It can also be observed that mean value of WACC is 0.117, median is 0.038.

The minimum value of WACC is -0.701 and maximum value stands at 0.896. Standard deviation is 0.173. Skewness of WACC is 1.32 and the kurtosis of WACC is 2.14 again indicting normality of the weighted average cost of capital.

Correlation Analysis

The data was analyzed by using correlation analysis. The present study examines CoC and its effect on FP from an empirical perspective based on firms data taken from Pakistan Stock Exchange. We use Pearson correlation analysis to check the association between the cost of capital and firm performance that is used as dependent variable. The result of correlation analysis is showed in table 2.

Table 2 Correlation: WACC, ROA, ROE, Leverage, firm size				
The table presents correlation of the dependent variable and independent variables. RoA and RoE are firm performance proxies where RoA is measured as net income over total assets; RoE is net income over total equity while the independent variable is Cost of Capital and is taken as WACC. The control variables are leverage and firm size. The total sample size is 520 firm-year observations for the period 2005-2014.				
Variables	ROA	WACC	ROE	Leverage
WACC	-0.079 <i>0.071</i>			
ROE	0.285 <i>0.000</i>	-0.093 <i>0.034</i>		
LEVERAGE	-0.294 <i>0.000</i>	-0.005 <i>0.909</i>	0.018 <i>0.681</i>	
SIZE	0.069 <i>0.114</i>	0.168 <i>0.000</i>	0.114 <i>0.009</i>	-0.080 <i>0.068</i>

ROA shows correlation analysis among the variables. That table shows a negative value of WAA with FP (-0.079) and that this association is statistically significant. Similarly, the same negative and statistically significant association is observable of RoE with WAAC. These negative correlations indicate that CoC has a negative effect on FP. Table 2 further shows that ROE is 0.681. This shows that there is 68.1% association present between the variables. The leverage is 0.068 which show that there is 6.8% association present between the variables and the size is -0.080 which show that there is 8.0% association present between the variables.

Multiple Regressions Analysis

The above correlation just shows association among the variables, but it does not identify the effect of one variable on the other. Therefore, Multiple Regression Analysis is used to examine the effect of cost of capital on firm performance.

Regression Analysis: ROA versus WACC, Lev, size

Multiple regression models are used to test the hypothesis. In the first model ROA is used as a dependent variable. While in second model, dependent variable is ROE. In both cases WACC is used as independent variable with leverage and firm size as control variables. The model results are represented in table 3 and Table 4, respectively. The results show that there is a negative relationship between WACC and firm performance. This negative relationship is statistically significant. The negative association shows that when cost of capital increase, then firm performance will decrease. The leverage has an impact upon the relationship between return on asset and WACC.

Table 3 Regression Analysis: ROA versus WACC, Leverage, Firm size					
The table presents regression analysis of the dependent variable and independent variables. RoA and RoE are firm performance proxies where RoA is measured as net income over total assets; RoE is net income over total equity while the independent variable is Cost of Capital and is taken as WACC. The control variables are leverage and firm size. The total sample size is 520 firm-year observations for the period 2005-2014.					
Term	Coef	SE Coef	T-Value	P-Value	VIF

Constant	1.059	0.063	16.90	0.000	
WACC	-0.124	0.058	-2.14	0.032	1.03
Firm size	0.012	0.008	1.44	0.149	1.04
Leverage	-0.069	0.010	-6.89	0.000	1.01
Table 3.1 F Statistic and Adj R square					
R	R-sq		R-sq(adj)		R-sq(pred)
0.23	9.64%		9.11%		5.50%

The regression coefficient return on asset is higher for firm with lower leverage. Leverage has a negative and significant relationship with the cost of capital, illustrating that firms that are able to absorb more debt are able to take advantage of the debt tax shield and reduce their cost of capital. Adjusted R square shows the extent of variance in the dependent variable due to variation in independent variable. R-squared value of the model is around 9.64% indicating the change in FP due to change in CoC.

Regression Analysis: ROE versus WACC, Lev, Size

In the second model we estimate the effect of WACC on RoE as an indicator of firm performance. Multiple regression model is again estimated here wherein WACC stands as an independent variable while RoE is taken as dependent variable controlling for firm size and leverage. The results are presented in table 4. The Table shows that there is a negative association between WACC and RoE as a proxy of firm performance. This negative association is statistically significant. In this analysis, total debt has also negatively significant with the performance of the firm. This indicate that any increase in leverage will decrease the performance of a firm. It has been argued that as leverage increase the weighted average cost of capital will decrease to the point where bankruptcy risk starts to cause the weighted average cost of capital to increase (Block & Hirt, 2008).

Table 4 Regression Analysis: ROE versus WACC, Leverage, Firm Size					
The table presents regression analysis of the dependent variable and independent variables. RoA and RoE are firm performance proxies where RoA is measured as net income over total assets; RoE is net income over total equity while the independent variable is Cost of Capital and is taken as WACC. The control variables are leverage and firm size. The total sample size is 520 firm-year observations for the period 2005-2014.					
Term	Coef	SE Coef	T-Value	P-Value	VIF
Constant	2.966	0.065	45.96	0.000	
WACC	-0.156	0.059	-2.62	0.009	1.03
Firm size	0.026	0.008	3.06	0.002	1.04
Leverage	0.007	0.015	0.65	0.516	1.01
Table 4.1 F Statistic and Adj R square					
R	R-sq		R-sq(adj)		R-sq(pred)
0.23	8.67%		2.10%		1.66%

These results are consistent with earlier literature such as Gode and Mohan (2003) who show a positive association between CoC and FP proxied book value of a firm's long term debt and the market value of

equity. The adjusted R-squared of the model is 8.67% that shows some percentage change in dependent variable due to independent variable.

IV. DISCUSSION AND CONCLUSIONS

The aim of this study is to examine the effect of cost of capital on firm performance with empirical evidence from PSX for the period of 2009 to 2019. The result of the study describes that there is a highly negative relationship between FP proxied by return on assets and return on equity with weighted average costs of capital.

This study is quite different from the analysis of Lopes and Alencar (2010) as they conclude that there is a negative and significant relationship between ratio of market value to book value and cost of capital but there is no significant relationship between return on assets and the cost of capital. In addition, these results are consistent with other studies which concludes that there is significant and positive association between return on assets and the cost of capital (Abasi et al., 2012).

Furthermore, this study also explains that return on equity have highly negative and significant relationship on WACC. This is different from the analysis of Osyani et al. (2012) who does not find any relationship between return on equity with cost of capital. But this study is similar with the study of Abass et al., (2012) and Hussain et al., (2012) who examined the effect of cost of capital on the Cement Industry of Pakistan with the results of having a negative and significant association between weighted average cost of capital and return on equity.

In contrast the study argues that firm size and leverage have positive and significant association with cost of capital which is not similar with the view of Nasir (2000), who has taken in 300 listed companies from Tehran Stock Exchange. The result from the regression analysis and correlation coefficient tests showed that there is no significant linear association between cost of capital and firm size of the sample taken from Tehran Stock Exchange.

The findings of present study shows a negative and significant association between cost of capital and firm performance. It is related with the previous studies of Lopes and Alencar (2010) who concluded that there is a negative and significant relationship between cost of capital and firm performance. However, others such as Chan et al. (2009) have shown that there is significant and positive relationship between costs of capital with FP. Osyani et al. (2012) studied the factors affecting cost of capital and firm performance. The results indicate that there is significant and negative relationship between ratios return on equity with capital cost. But there is also a significant and positive relationship between the return on assets and the cost of capital. But significant relationship between growth opportunities and the capital cost has not been observed. Wu et al. (2012) study the same association for 484 Taiwanese companies that resulted in a positive and significant relationship between cost of capital and ratio of market value to book value.

Every study has its limitations. This study too in no exception. For example, we are only limited to selected companies and selected data period due to unavailability of data for a limited number of companies. Other measures of CoC and FP could not be used due to time constraints. Based on the significant role of the financial institutions in financing the firms through loans, it is suggested to conduct a study about the impact of interest rate on the capital structure and competition of the product market. Moreover, this study is limited to 52 firms, others may try different time periods as well as a more extended sample size of the firms for generalizability of the results.

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