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Cost of Capital – The Effect to the Firm Value and Profitability; Empirical Evidences in Case of Personal Goods (Textile) Sector of KSE 100 Index

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Abstract
In this research, we examine whether and how accounting information about a firm manifests in its cost of capital. We demonstrate that quality of accounting information can influence the impact of cost of capital on Firm Value and Profitability and found empirical evidence about cost of capital and its performance effect on Firm Value and Profitability. We also found the evidence that there is a significant impact of Weighted Average Cost of Capital on Firm Value and Return on Asset.There is a positive effect between Firm Size and Return on Assets if there is any change occurs in Independent Variables except one variable i.e. WACC. WACC gives negative impact on Firm Value and Return on Assets. Any change in WACC can affect the return on assets of the firm. Another evidence found that there is no effect of Total Debt Ratio on Return on Asset.
Keywords: Return on Asset (ROA), Firm Value (Tobin Q), Weighted Average Cost of Capital (WACC), Total Debt Ratio, Size (Total Assets), Gross Domestic Product (GDP).

INTRODUCTION

This research is conducted to bridge the gap by empirical evidence about cost of capital and its effect to the performance of KSE 100 Index listed companies from the perspective of Firm Value and profitability.

The data for analysis is retrieved from Personal Goods (Textile) Sector of 4 listed companies for 10 years period from 2004 to 2013.The names of the companies are:

1. Nishat Mills Limited.
2. Kohinoor Textile Mills Limited.
3. Colgate Palmolive (Pakistan) Limited.
4. Bata Pakistan Limited.

This study carries out the ratio of 02 variables (Dependent and Independent) to identify the situation of the Organization. The elements of variables are:

1. Dependent Variable:
    a. Return on Asset.
    b. Firm Value (Tobin Q).
2. Independent Variable:
    a. Weighted Average Cost of Capital.
    b. Total Debt Ratio.
    c. Size (Total Assets).
    d. GDP.

The purpose of the study is to explore the effects of capitalization cost(Total Debt Ratio and Weighted Average Cost of Capital to the firm's performance) by reviewing the value of firm i.e. Tobin-Q and profitability or Return on Assets and GDP.

It is observed that the value of firm and profitability increase not only the size of the company but it is also useful to increase the GDP of the Country by resulting economic potential rises and the people of the Country get the benefit of it. The keyfunction of Cost of Capital is to ascertain that firm has the ability to increase the size of the business and continue operating in a large scale. Eventually, it involves crucial decisions on multiple aspects including managing Long Term Debts, Retained Earnings, Asset Management and Capital Management.Keeping in view, managing the Cost of Capital has become one of the most important issues in the Firms where many financial executives strive to identify the appropriate level of cost of capital.

Thus, its requirement are having an impact on the Market Valuation of a business because Shareholders and Investors analysis first to invest their money into business and it has also been pointed out that an effective Capital Budgeting has become an essential element of completebusiness strategy to generate Shareholder value, firm's value and profitability.

For an investment to be valuable, the predictable Capital Return has to be higher than the Capital Cost. Because Investors are expected to put their capitals to work in order to get maximum profit or return from the Organization. Therefore, a firm should earn maximum profit so they can satisfy their Shareholders and also can be able to increase the value of the firm.

Further, efficient Capital Budgeting increases Organization's Cash Flows, Retained Earning and Size of the Organization which in turn increase the GDP of the Country and return to Shareholder.

The magnitude of Cost of Capital is not new in the field of Finance literature and the review of prior literature reveals that there is a signification relation between firm value and profitability.

According to Mary E. Birth, Yaniv Konchitchki and Wayne R. Landsman (2013), their research provides evidence those firms with more transparent earning enjoy a lower cost of capital. In their study, they based their earnings transparency measure on the level to which earnings and change in earnings recovery contemporaneously with return (2013).

Whereas, Mariana S (2002), in her empirical study signify that most of the evidence to date is based on user cost of capital in analyses of economic. In the study, she adds to the literature to constructing a non-cumulative, industry-specific mini user cost variable and directing on a special class a firm (2002).

However, the study done by Wignall A. B. and Roulet C, (2012) which argues that interest rates are at extremely low levels to take banks, and to come acrossfor yield has pressed the liquidity driven speculative bubble from real estate, lacking in originality and planned products markets into the corporate debt market. Therefore, this paper represents a panel model for the companies depend on the cost of capital, the accelerator and uncertainty, while buybacks are driven mainly by the gap between the cost of capital and profitability.

Similar to most recent study by Campbell R. Harvey, reveals that a long-standing problem in finance is the calculation of cost of capital in domestically and internationally. There is widespread discrepancy, mostly among practitioners of finance, as to how to approach this problem. However, the International Cost of Capital and Risk Calculator (ICCRC) provides alternative methodology which has strong economic foundations (2001).

According to Jakub W. Jurek Erik Stafford (2011), they studied the cost of capital for alternative investments. They document that the risk shape of the collective hedge fund universe can be accurately matched by a simple index put option writing plan that proposals monthly liquidity and complete transparency over its state-contingent payoffs. The contractual nature of the put options in the standard selection allows us to evaluate appropriate required rates of return as a function of stockholder risk priorities and the underlying distribution of market returns. This simple framework produces a number of diverse estimates about the cost of capital for alternatives relative to traditional mean-variance analysis.

According to Dr. Amardeep (2013), the cost of capital is the very basis for financial appraisal of new capital expenditure proposals. The conclusion of the finance manager will be unreasonable and wrong in case the cost of capital is not correctly determined. The capital cost is also important consideration in capital structure decisions. The finance manager must raise capital from different foundations in a way that it optimizes the risk and cost factors.

According to Alexander Peter Groh and Oliver Gottschalg (2009-2010), they determine a public market equivalent that matches it with respect to its timing and its methodical risk. The sensitivity analyses highlight the necessity of a comprehensive risk alteration that reflects both operating and leverage risk for an accurate of buyout performance.

According to Frank Browne, Thomas Conefrey and Gerard Kennedy (2013), their paper employs the user cost of capital to examine Irish house price movements. Between 2002 and 2007, a mixture of factors including rapid house price appreciation and the prevailing fiscal and economic environment shaped a strong bias towards homeownership.Both fiscal and financial policy measures which could enable a more well-organized functioning of the housing market are discussed.

Consistent with these results, Wurgler (2000) uses industrial statistics to show that the understanding of investment growth to value addition of growth (i.e., investment prospects) is lower in countries with sickindustrializedfinancial markets. The results in this research are also associated (though less directly) to study which pursues to understand the role of ownership rights for investor protection.

According to Richard Lambert Christian Leuz Robert E. Verrecchia (2005-2006), they determine that the worth of financial information can influence the cost of capital, both straight and indirectly. The straight effect occurs because sophisticated quality disclosures affect the firm's assessed co-variances with other firms' cash flows, which is not diversifiable. The secondary effect occurs because higher quality disclosures affect a firm's real decisions, which likely modifies the ratio of the firm of the expected future cash flows to the co-alteration of these cash flows with the sum of all the cash flows in the market.

While the influence of R&D and investment tax credits is rarely rejected, the opposite is also argued; that is, high-tech capital expenditure is more sensitive to changes in its cost than capital related with the previous economy (Tevlin and Whelan 2003).

METHODOLOGY

1. DATA

This research is conducted to bridge the gap by empirical evidence about cost of capital and its effect to the performance of KSE 100 Index listed companies from the perspective of Firm Value and profitability.

The data for analysis is retrieved from Personal Goods (Textile) Sector of 4 listed companies for 10 years period from 2004 to 2013. This study carries out the ratio of 02 variables (Dependent and Independent) to identify the situation of the Organization. The elements of variables are:

1. Dependent Variable:
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    d. GDP.

The purpose of the study is to explore the effects of capitalization cost (Total Debt Ratio and Weighted Average Cost of Capital to the firm's performance) by reviewing the value of firm i.e. Tobin-Q and profitability or Return on Assets and GDP.

2. ANALYSES

Dependent Variable: ROA
Method: Panel Least Squares
Date: 08/27/15 Time: 11:13
Sample: 2004 2013
Periods included: 10
Cross-sections included: 4
Total panel (balanced) observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
WACC	39.02860	5.631218	6.930757	0.0000
TDR	-6.327039	10.56212	-0.599031	0.5529
TA	0.000690	0.000746	0.925081	0.3611
GDP	0.304953	0.086801	3.513234	0.0012

R-squared	0.320285	Mean dependent var	22.78275
Adjusted R-squared	0.263642	S.D. dependent var	13.28446
S.E. of regression	11.39957	Akaike info criterion	7.799667
Sum squared resid	4678.203	Schwarz criterion	7.968555
Log likelihood	-151.9933	Hannan-Quinn criter.	7.860732
Durbin-Watson stat	1.218815		

Dependent Variable: FV
Method: Panel Least Squares
Date: 08/27/15 Time: 11:16
Sample: 2004 2013
Periods included: 10
Cross-sections included: 4
Total panel (balanced) observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
WACC	702.5682	218.5799	3.214240	0.0028
TDR	-185.3752	409.9764	-0.452161	0.6539
TA	-0.044306	0.028951	-1.530358	0.1347
GDP	-1.605024	3.369253	-0.476374	0.6367

R-squared	0.129209	Mean dependent var	226.9895
Adjusted R-squared	0.056644	S.D. dependent var	455.5733
S.E. of regression	442.4825	Akaike info criterion	15.11732
Sum squared resid	7048468.	Schwarz criterion	15.28621
Log likelihood	-298.3464	Hannan-Quinn criter.	15.17838
Durbin-Watson stat	1.613813		

Dependent Variable: ROA
Method: Panel Least Squares
Date: 08/27/15 Time: 11:18
Sample: 2004 2013
Periods included: 10
Cross-sections included: 4
Total panel (balanced) observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
WACC	24.58453	5.746904	4.277873	0.0001

R-squared	0.325047	Mean dependent var	22.78275
Adjusted R-squared	0.307285	S.D. dependent var	13.28446
S.E. of regression	11.05659	Akaike info criterion	7.692637
Sum squared resid	4645.430	Schwarz criterion	7.777081
Log likelihood	-151.8527	Hannan-Quinn criter.	7.723169
F-statistic	18.30019	Durbin-Watson stat	1.249943
Prob(F-statistic)	0.000123		

3. RESULTS AND INTERPRETATION:

According to the above results, there are two dependent variables i.e. Return on Assets and Firm Value (Tobin Q) and independent variables are Weighted Average Cost of Capital (WACC), Total Debt Ratio, Size (Total Assets) and Gross Domestic Product (GDP).

If we compare only Return on Assets and Weighted Average Cost of Capital, the result is appearing to be significant as it is less than 0.05. Therefore, it is showing that there is a significant impact of WACC on return on assets.Another result found that return on asset are depended on

WACC and GDP as the significant result is less than 0.05. But Total Debt Ratio and Total Asset are not correlated with ROA.According to another analyses, Firm value and WACC are only correlated with each other as the result is significant. TDR, TA and GDP are not correlated as the results are insignificant.

DISCUSSION

The above study is conducted to analyses and interpret the empirical proof about Capital Cost and performance effect. For which, listed companies of KSE 100 Index have been taken to identify the level of performance and value of the firm. In this research, 4 companies have been chosen for the study. Personal Goods (Textile) Sector has been targeted for the result. Data has been taken for 10 fiscal years from 2004 to 2013.

The names of the companies are: Nishat Mills Limited, Kohinoor Textile Mills Limited, Colgate Palmolive (Pakistan) Limited and Bata Pakistan Limited.

This research conveys out 02 variables (Dependent and Independent) to study the current situation of the Organization. The elements of variables are:

a) Return on Asset and Firm Value (Tobin Q).These 2 variables are used as dependent variable.
b) Weighted Average Cost of Capital, Total Debt Ratio, Size (Total Assets) and GDP. These variables are used as Independent Variables.

The main aim of this research is to identify and explore the effects of cost of capital by considering the Firm value and its performance in terms of profitability.

It is notified that Tobin Q (Firm Size) can be maximized with the help of value of firm and profitability ratio. Furthermore, it is also beneficial to enhance the Country's GDP so the economy can be able to survive in an International Market.

To study, analyses and interpret the impact of cost of capital in firm value and profitability, correlation test has been performed. Few test performed where all dependent and independents are tested together and few test performed when one dependent variable compares with the all independent variables. Further tests also performed where one dependent and one independent variable are tested. According to the analyses and results, there is a significant impact of Weighted Average Cost of Capital on Firm Value and Return on Asset. There is a positive effect between Firm Size and Return on Assets if there is any change occurs in Independent Variables except one variable i.e. WACC. WACC gives negative impact on Firm Value and Return on Assets. Any change in WACC can affect the return on assets of the firm. Another evidence found that there is no effect of Total Debt Ratio on Return on Asset.

CONCLUSION

For an investors point of view, all investors wants their capital to be invested on that firm where they can have maximum return otherwise they will not be able to retain in the firm. A firm should maintain its profit and try to improve it. If the rate of return is not higher than the cost of capital, then a firm cannot survive and Shareholders will switch to another firm where they can get maximum benefit. Therefore, a firm should make a strategy in the sense where their profit margins can be maximized and they can give benefits to their Shareholders in the shape of cash dividend or stock dividend so they can be associated with the same organization and cannot move ahead.

According to the result of 04 listed companies, it is observed that any change in Independent Variables i.e. Weighted Average Cost of Capital and GDP will bring change in Dependent Variable (Firm Value and Return on Assets). There is a positive effect between Firm Size and Return on Assets if there is any change occurs in Independent Variables except one variable i.e. WACC. WACC gives negative impact on Firm Value and Return on Assets. Therefore, a company should maintain its cost of capital and increase the size of the firm. Ultimately, their growth will rise and interest of Shareholders will increase to invest into the Personal Goods Sector.

Another evidence found that there is no major impact of Total Debt Ratio on ROA. Therefore, company should focus on Firm Value and percentage of WACC. A company should earn fruitful profit and give a reasonable part of profit to its Shareholders so they can take keen interest on firm and invest more. A company should focus to increase the value of the firm and its share. Increment of share value and firm size will ultimately effect the ROA and will reduce the WACC percentage.

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