IMPACT OF LEVERAGE OR DEBT MANAGEMENT ON STOCK RETURNS: EMPIRICAL EVIDENCE FROM FUEL &ENERGY & TEXTILE SECTOR OF PAKISTAN

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ABSTRACT

The ultimate objective of every business organization is to manage risk and maximize the returns. This paper aim to investigate the impact of debt/leverage management on stock returns of listed companies on Pakistan Stock Exchange. For the current research the data has been collected from Fuel & energy sector and Textile sector of Pakistan for the period 2006-2011. The financial ratio analysis technique was used to measure debt management while annual stock returns were collected from the PSE website. 5 financial ratio which were used in current study to calculate debt management predominantly included Net debt to EBITDA, Net debt to Equity, Interest coverage Ratio, Asset to Equity and Cash flows from operations to Net Debt. *SPSS 20 version was used to examine the data and Pearson correlation & Ordinary Least Square regression analysis were performed to estimate the results. Findings demonstrated that more the organizations focus on leverage management, more would be the stock returns of the companies. The research also includes the recommendations for the future researchers.*

Keywords: Debt Management, Leverage, Financial Ratios, Stock Returns

INTRODUCTION

The ultimate objective of every business organization is to earn profit and build reputation in the market. The financial institution, private and public limited companies have a vision to increase their investment for which they undergo very calculated operations to enhance their ultimate performance. Financial performance is a benchmark to determine the market worth of any organization. Shareholders, investors, creditors and Management are the parties that are interested in financial performance of an organization (Singal, 2014). Stock returns are an indicator of a financial health of any organization (Hodrick, 1991). Lincoln (2014) narrated in his research that Managers pay dividend when they have no profitable investment opportunities but it has a negative impact on share prices of firms

Numerous researches explained the concept of stock returns. Strong (2009) narrated that income obtained from the Stock security is known to be as Stock returns. Literature evidenced that there are two dimensions that can be used to measure the stock returns of a company, predominantly includes Capital gains and Dividends (Khan, 2013). Numerous studies reported a strong and positive relationship between retained earnings and stock prices (Kumar & Hundal, 1986). Further Beisland (2014) also discovered a positive relationship between retained earnings and stock prices.

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Javed and shah (2015) conducted a research to investigate relationship of retained earnings on stock returns of a company. Convenience sampling technique was used to collect data from 7 companies of food industry listed in Pakistan Stock Exchange from period 2009-2014. Linear regression and Spearman's correlation analysis was used to analyze the data. The findings demonstrated an insignificant relationship between dependent and independent variables.. Comprehensively, the study showed weak and insignificant relationship with stock returns (Javed & Shah , 2015).

Numerous studies have been found that measure the profitability of the firms and its impact on stock returns. Foroghi and Jahromy (2015) conducted a research to investigate Stock Returns based on the price, return and differenced model. 60 members of Tehran Stock Exchange during the period of 2005 to 2012 were studied. Findings showed that higher the profitability of the firm, better would be the stock returns of the firm. Further Ghi (2015) also measured the stock returns of 175 firms in HOSE with respect to capital structure and financial performance. The OLS regression analysis was performed to measure stock returns. Findings reported a positive impact of financial performances on stock returns while capital structure was negatively related to Stock returns of an organization.

Amihud, Y. (2000) reported that Illiquidity is negatively related to stock returns and affects more adversely to stock returns of small firms. Datar & Naik also evidenced a strong and significant relationship between liquidity and stock returns (1998). Studies also investigated a relationship between firm's efficiency and stock returns. The data was collected from the 399 listed insurance firms in 52 countries during the 2002-2008 periods. The findings evidenced a significant and positive relationship between firm's efficiency and stock returns (Gaganis, Hasan & Pasiouras, 2013)

Iqbal (2015) examined a relationship between risk adjusted stocks and the firms operating performance which was measured in terms of profitability, liquidity, leverage, and size (market capitalization). The sample taken for the study included 107 companies listed on Pakistan Stock Exchange over the period of 12 years from 1996- 2007. The findings showed a positive and significant relationship between profitability and firm's financial performance whereas a negative relationship exists between leverage and stock returns.

Adamia, Goughb, and Muradogluc et al., (2010) also investigated a relationship between abnormal stock returns and leverage. The study measured stock returns by using the asset pricing models of Sharpe and Lintner. The findings suggested that returns are negatively related to firm leverage. Chai and Zhang, 2010 described that firms having high leverage raise their chance of failure to pay their debt and its projected cost. If the default risk is valued, a considerable raise in the leverage should lead to a higher probable future return. The worth of a firm is independent of its capital structure and the return on equity capital is positively connected to leverage (Modigliani-Miller, 1958).

Muradoglu and Sivaprasad (2008) projected a negative association among returns and leverage. Myers (1977) also recommended raise in the leverage ratio can effect in a lesser stock price, all other factors equivalent. Numerous studies have been found that discuss the study variables from different dimensions but have different results (Penman et al, 2007). Hamada, 1972 demonstrated that returns raise with leverage; other authors demonstrate that returns reduce by means of leverage (Korteweg, 2009;

Therefore this paper explores the association among leverage management and stock returns, contributing towards the on hand empirical proofs. Apropos in view, the current study will investigate the impact of leverage or debt management on stock returns of the companies in Textile and Energy sector of Pakistan. The current research would adopt the

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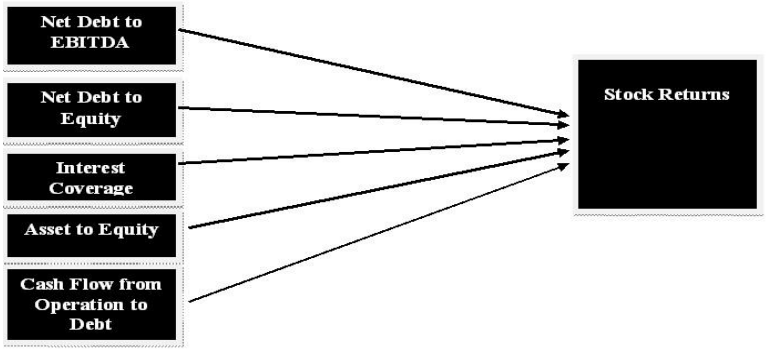
methodology of financial ratio analysis technique. Net debt to EBITDA, Net debt to Equity, Interest coverage Ratio, Asset to Equity and Cash Flows from Operations to net debt would be the indicators of Leverage/debt management whereas the annual stock returns of the companies will be collected from the Pakistan Stock Exchange. Hence the Research Questions of the research includes; Is there existence of any relationship between debt management and stock returns of companies in textile sector and Fuel & Energy sector of Pakistan? and the Main objective of the research study includes; To investigate the relationship between debt management and stock returns of companies in Textile sector of Pakistan and Fuel & Energy sector of Pakistan.

This findings will contribute significantly in existing literature. This study demonstrates the impact of Net debt to EBITDA, Net debt to Equity, Interest coverage ratio, Asset to Equity and Cash Flows from Operations to Net debt on stock returns in Fuel & Energy and Textile sector of Pakistan. As such no study was found in the context of Pakistan. This study will help to explore new dimensions in the Fuel and Energy and Textile sector of Pakistan and overcome the challenges & risk factors and improve the financial performance of the firms.

THEORETICAL FRAME WORK



HYPOTHESES

H_1: Net debt to EBITDA is significantly related to stock returns of firms in Textile Sector and Fuel & Energy Sector of Pakistan

H_2: Net debt to Equity is significantly related to Stock Returns of firms in Textile Sector and Fuel &Energy Sector of Pakistan

H_3: Interest coverage Ratio is significantly related to Stock Returns of firms in Textile Sector and Fuel &Energy Sector of Pakistan

H_4: Asset to Equity is significantly related to Stock Returns of firms in Textile Sector and Fuel & Energy Sector of Pakistan

H_5: Cash flows from Operations to net debt is significantly related to Stock Returns of firms in Textile Sector and Fuel & Energy Sector of Pakistan

METHODOLOGY

Research Design: The Purpose of the study is mainly hypotheses testing and is a co-relational. The time horizon of the current study is cross-sectional and study setting non contrived environment with researcher's interference minimum. The data collection was secondary and the unit of analysis was organization.

Sources of data collection

The study uses the quantitative research to measure the impact of debt management ratio on stock returns of the firms in textile sector and Energy sector of Pakistan. The data regarding

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the debt ratios of companies during the period 2006 to 2011 was collected from the official websites of the companies and stock returns were collected from the Pakistan Stock Exchange Website (PSE).

Population/Sample Size

All companies operating in textile sector and energy sector of Pakistan were included for the purpose of the current research from the time period 2006 to 2011. Each company was analyzed separately. According to SECP in total 18 companies were operating in textile sector, Out of which 6 companies were taken from Made up textile and 12 from other textile NES Pakistan and 18 were operating in Fuel & Energy sector of Pakistan.

Statistical Method

SPSS 20 version was used to analyze the results. Pearson correlation and OLS regression analysis was performed to investigate the impact of different debt ratio on stock returns. For the purpose of current research 5 debt ratio were considered to be independent variable and stock returns as dependent variables. The paper uses indicators of descriptive statistics such as Mean, Minimum, Maximum and Standard deviation etc. to investigate and comment an annual and volatility of debt ratio and stock returns.

Results & Analysis of Fuel & Energy Sector

Table 1. Descriptive Statistics

Variables	Minimum	Maximum	Mean	Std. Deviation
Net Debt to EBITDA	-430.60	1022.96	42.369	170.0541
Net Debt to Equity	.04	1375.15	51.395	158.553
Interest Coverage	-.66	2.52	1.0007	.94503
Asset to Equity	.01	1072.00	132.581	257.796
Cash Flow from Operation to Debt	-.66	2.52	1.1175	.90474
Stock Returns	.10	92.10	14.23	20.21

The Mean and Standard deviation of Independent variables that includes Net Debt to EBITDA are 42.369 and 170.0541, Net Debt to Equity are 51.395 and 158.553, Interest Coverage are 1.0007and .94503, Asset to Equity are 132.581 and 257.796 and Cash Flow from Operation to Debt are 1.1175and .90474. The Mean and Standard deviation of dependent variables Stock Returns are 14.23 and 20.21.

Table 2. Correlation Matrix of all Variables (N = 106)

Variables	I	II	III	IV	V	VI
Net debt to EBITDA	1					
Net debt to Equity	.026	1				
Interest Coverage	-.086	-.173	1			
Asset to Equity	-.030	.443**	-.039	1		
Cash flow to Debt	.205*	-.014	.007	.135	1	
Stock Returns	-.079	-.054	.205*	-.082	.127	1

**P < 0.01 level (2-tailed), * P < 0.05 level (2-tailed)

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In above mentioned table there is no significant relationship exist between independent variable Net debt to EBITDA, Net debt to Equity, Cash flow from Operations to debt and Asset to Equity and dependent variable Stock Returns in Fuel & Energy Sector of Pakistan. There exists a positive significant relationship between Interest coverage and stock returns which shows that higher the ability of firm to pay off its interest, greater will be the Stock returns of a firm in Fuel & Energy Sector.

Table 3. Regression Analysis Model Summary (N=106)

Model	*R*	R^2	*Adj* R^2	*F*	*Sign*	*t*
1	.277	.077	.030	1.657	**.000**	2.01

**P < 0.01 level (2-tailed), * P < 0.05 level (2-tailed)

The overall model regression of independent variables; Net debt to EBITDA, Net debt to Equity, Interest coverage, Asset to Equity, Cash flow From Operation to debt and dependent variable; Stock returns is shown above mentioned table. The value of R =.277 which demonstrate that independent variables contribute 27% in bringing change in dependent variable while value of t is 2.01 which shows significant relationship between independent and dependent variables.

Results & Analysis of Textile Sector

Table 4. Descriptive statistics

Variables	Minimum	Maximum	Mean	Std. Deviation
Net Debt to EBITDA	-31.21	616.49	25.2791	92.07131
Net Debt to Equity	-10.17	4.84	.2976	3.73027
Interest Coverage	-14.94	31.48	.9618	4.81686
Asset to Equity	-283.70	150.18	-5.4575	84.64034
Cash Flow from Operation to Debt	-2.00	.80	-.0206	.30658
Stock Returns	.06	92.10	9.2524	16.50605

The Mean and Standard deviation of Independent variables that includes Net Debt to EBITDA are 25.2791 and 92.07131, Net Debt to Equity are .2976 and 3.73027, Interest Coverage are .9618 and 4.81686, Asset to Equity are -5.4575 and 84.64034 and Cash Flow from Operation to Debt are -.0206 and .30658. The Mean and Standard deviation of dependent variables Stock Returns are 9.2524 and 16.50605.

Table 5. Correlation Matrix of all Variables (N = 108)

Variables	I	II	III	IV	V	VI
Net debt to EBITDA	1					
Net debt to Equity	.164	1				
Interest coverage	-.062	-.073	1			
Asset to Equity	.015	**.608****	-.002	1		
Cash flow to Debt	**-.034***	-.068	**.206***	.020	1	
Stock Returns	.135	.074	-.043	-.023	**-.181***	1

**P < 0.01 level (2-tailed), * P < 0.05 level (2-tailed)

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In above mentioned table no significant relationship exist between independent variables Net debt to EBITDA, Net debt to Equity, Interest coverage and Asset to Equity and dependent variable Stock returns in Textile industry of Pakistan. There is negative significant relationship exists between Cash Flow from Operation to debt and Stock Returns which shows that higher the cash flow from operation to debt, lower will be Stock Returns.

Table 6. Regression Analysis Model Summary

Model	R	R^2	*Adj* R^2	*F*	*Significance*	*t*
1	.201	.041	-.010	802	.000	5.058

**P < 0.01 level (2-tailed), * P < 0.05 level (2-tailed)

The overall model regression of independent variables; Net debt to EBITDA, Net debt to Equity, Interest coverage, Asset to Equity, Cash Flow from Operation to Debt and dependent variable; Stock Returns is shown above mentioned table. The R square of independent variables and dependent variable is 20%. The value of t is 5.058 which show significant relationship between independent and dependent variables.

DISCUSSION

Current research basically emphasized the impact of debt Management Ratios on Stock returns. For the purpose of the present research five type of Financial Ratio i.e. Net debt to EBITDA, Net debt to Equity, Cash flow from Operations to debt, Asset to Equity and Interest coverage were used to measure Debt or leverage of the firms in Textile and Fuel & Energy Sector of Pakistan.

The study hypothesized that Net debt to EBITDA has a significant relationship between Stock returns in Fuel and Energy sector as well as Textile Sector of Pakistan (H_1). The findings of the Pearson correlation demonstrated that No significant relationship exist between Net debt to EBITDA and stock returns both in Textile sector as well as Fuel Energy Sector of Pakistan.

he study further hypothesized that Net debt to Equity has a significant relationship between Stock returns in Fuel and Energy sector as well as Textile Sector of Pakistan (H_2). The findings of the Pearson correlation demonstrated that No significant relationship exist between *Net debt to Equity* and stock returns both in Textile sector as well as Fuel& Energy Sector of Pakistan.

The study further Hypothesized that Interest Coverage has a significant relationship between Stock returns in Fuel and Energy sector as well as Textile Sector of Pakistan (H_3). The findings of the Pearson correlation demonstrated that positive significant relationship exists between Interest coverage and stock returns in Fuel & Energy Sector while insignificant relationship was reported between Interest Coverage and Stock returns of Textile Sector.

The study further hypothesized that Asset to equity has a significant relationship between Stock returns in Fuel and Energy sector as well as Textile Sector of Pakistan (H_4). The findings of the Pearson correlation demonstrated that No significant relationship exist between Asset to Equity and Stock returns both in Textile sector as well as Fuel Energy Sector of Pakistan.

Lastly, the study hypothesized that Cash flow to Operations to debt has a significant relationship between Stock returns in Fuel and Energy sector as well as Textile Sector of Pakistan (H_5). The findings of the Pearson correlation demonstrated that no significant

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relationship exists between Cash flow from operations to debt and stock returns in Fuel & Energy Sector while a negative significant relationship exists between Cash Flow from Operation to debt and Stock Returns which shows that higher the cash flow from operation to debt, lower will be stock returns.

Further the findings of the regression analysis in Fuel & Energy Sector of Pakistan demonstrated that independent variables of the study contribute 27% in bringing change in the Dependent variables and the value of t is 2.01 which show significant impact of independent and dependent variables in Fuel & Energy Sector of Pakistan. With respect to Textile Sector findings of the regression analysis also demonstrated that independent variables contributed 20.01% in bringing change in the Dependent variables and The value of t is 5.05 which shows significant impact of independent and dependent variables comprehensively in Textile Sector of Pakistan.

CONCLUSION AND IMPLICATIONS

This study investigated the impact of independent variable; debt management ratios that includes net debt to EBITDA, Net debt to Equity, Interest Coverage, Asset to Equity, and Cash Flow from Operation to Debt and dependent variable; Stock Returns in Fuel and Energy and Textile sector of Pakistan. The study employed the technique of Pearson correlation to measure the relationship between the independent and dependent variables. Further ordinary Least Square Regression model was also used to study the impact of debt management ratios on stock returns of the firms in Textile and Fuel and Energy sector of Pakistan. Findings demonstrated that positive significant relationship exists between Interest coverage and stock returns in Fuel & Energy Sector which shows that higher the ability of firm to pay off its interest, greater will be the Stock returns in Fuel & Energy Sector, However a negative significant relationship exists between Cash Flow from Operation to debt and stock returns which shows that higher the cash flow from operation to debt, lower will be Stock Returns.

The Current research encountered the time constraint the future researchers can conduct the study by overcoming this constraint. Further we investigated the impact of five debt management Ratio on Stock return However, future researchers can conduct this study by considering other dimensions of leverage/debt management Lastly the study was conducted on the Fuel& Energy and Textile sector of Pakistan. The future researcher can conduct this study in other sectors predominantly pharmaceutical, Food & Beverages.

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