

Impact of Financial Leverage on Performance of Pharmaceutical Listed Companies in Pakistan

Ahsan Javed¹ Naveeda Zeb² Raja Nabeel-Ud-Din Jalal^{3*}

1.MBA Research Scholar, University of Kotli Azad Jammu & Kashmir, Pakistan

2.Assistant Professor, Department of Business Administration, Faculty of Administrative Sciences Kotli,
University of Kotli Azad Jammu & Kashmir, Pakistan

3.Faculty of Management Sciences, Riphah International University, Islamabad, Pakistan

Abstract

The aim of this research project to examine the impact of financial leverage (debt ratio) on financial performance (return on asset) of pharmaceutical companies in Pakistan. The study focus on pharmaceutical listed companies on Karachi stock exchange for the period of 2005-2014. In this research select the 100 % population to find out the impact of financial leverage on financial performance of pharmaceutical companies in Pakistan and pharmaceutical companies consist of 9 firms. Secondary data collected through companies Annual reports and financial statements. Descriptive statistics, Pearson Correlation and Regression Analysis were used to find out the relationship and impact of financial leverage on financial performance of pharmaceutical companies in Pakistan. Debt ratio (DR) used as an independent variable and return on asset (ROA) used as a dependent variable along with current ratio (CR), size (SI) and asset turnover used as control variable. Results of study indicate that there is significant positively relationship between debt ratio and return on assets and regression show the debt ratio and return on assets have a significant positively impact on return on asset. Thus we can say firms used the external fund (debt) to increase their financial performance.

Keywords: Financial leverage, financial performance, Debt ratio and return on assets.

1. Introduction

This main purpose of this research to identify the impact of financial leverage on performance of pharmaceutical companies in Pakistan during the period of 2005-2014. The main work on leverage introduced Modigliani and Miller (1958) that explain the return on equity and amount of debt key role play capital structures of the firms in a friction market and also describe theoretical concept that leverage is one of the best source that describe the risk and also claim that more levered firm face high risk for equity holders. According to Smith (1999) Leverage can define to make an investment through borrowed money and also the return on that investment. The financial leverage when we use high level is more risky for a company.

The financial leverage is define borrowed money those use the rise the earning of the company and also improve the production volume and it is also measure through the debt ratio and total assets of company. The greater amount of debt also increases the large amount of financial leverage. Interest rate about the leverage is fixed when its cost a loan allow an organization to generate the more earning without an increasing the equity capital that increase the dividend payment. However the high financial leverage will be beneficial for boom period. A company requires finance for achieving its short term as well as long term financial requirement. There are many options for firm to finance these funds, like debt and equity. A successful mixing of different types of finance is suitable from the perspective of investors, lenders and firms (DeLoof, 2007). Financial leverage basically determines the more risk for company about the financial arrangements. Financial leverage also increase the good economic condition in the market and it can also improve the earning per share in bad condition of the economy. (Panday, 2010).

Damouri (2012) when owners' equity and undistributed income are not enough then the financial managers of firms used debt financing to finance its projects or assets. In the capital structure of the company the level of debt financing used is known as financial leverage. When the debt level increased it also improve the capital structure and also improve the financial leverage which will impact the financial performance of firms. Financial leverage basically define debt and equity of the company that is use to increase the financial wealth of the company. Mostly companies invest equity and debt for investment and earn the maximum profit. The primary objective of company using debt capital to increase the financial wealth and also shareholder return in favorable economy. The financial leverage also playing the main role to improve the shareholder return that is mostly based the following assumptions that the fixed charge fund and the net assets of company that is lower cost abstained and return on investment (Innocent et al, 2014).

Hatfield et al (1994) define the concept of high and low debt for firms to take market decision of granting the finance by companies. It also show high and low debt firms fitting from same industry and their perception of market decision and leverage ratio has been proved to reverse case. Jensen (1986) also describes the concept of leverage in agency cost theory, if the optimal face value of debt decreases then the marginal product available

for firm to increase their investment. According to Titman and Wessles (1988) also describe the financial leverage concept, if the small firm issuing regularly the long term financial leverage then it is negatively associated with firm uniqueness and small firm also face high transaction cost. Financial leverage mostly companies used through its securities such as debt capital and its preferred equity of the company. When a company pay higher interest that mean its lead more financial leverage of the company. When a company increase the debt as a result company pay more and more interest and earning per share is decrease. When a company increases the debt and equity, interest rate increase and earning per share decrease. As a result the risk of shareholder return increased (Rajkumar, 2014). This research is significant for pharmaceutical sector in Pakistan and it is also helpful for investors and shareholder and debtors. This study will be helpful to practitioners, academia and policy makers who are interested in find out impact of financial leverage on financial performance of pharmaceuticals listed companies in Pakistan. Detailed study on manufacturing and financial sector will be more helpful for practitioners for having more knowledge about leverage and debt financing for improving their companies performance.

1.1 Problem Statement

Pharmaceutical companies of Pakistan facing a lot of problems regarding financial leverage and financial performance, No focus has been done to solve these problems of financial leverage. The problems of financial leverage mostly measured by the debt ratio, has always under the discussion in the field of financial management because it involve the long term success for pharmaceutical companies to improve their financial performance. Hence, the main purpose of this research to identify the impact of financial leverage on financial performance of pharmaceutical listed companies in Pakistan.

1.2 Research Objectives

- To check the relationship between financial leverage and financial performance of the pharmaceutical listed companies in Pakistan.
- To examine the impact of debt ratio on return on assets of pharmaceutical listed companies in Pakistan.

1.3 Research Questions

- What is the impact of debt ratio on return on assets of pharmaceutical listed companies in Pakistan?

2. Literature Review

According to Rehman (2013) financial leverage basically in the form of a loan and debt that proceeds the reinvested to improve the company performance and decrease the other cost like interest payments. Mostly levered firms use its debt and equity made up of ownership and less levered firm use only equity for ownership. Leverage also provides the greater return to the investors than would have been available for investment. Dare and Sola (2010) also define the debt and equity of the firms also suggest company uses debt and equity as an investment and also define the capital structure such as debt, preference capital, and owners' equity describe the financial leverage and gearing. According to smith (1990) leverage can be define the borrowed money use for investment and the return that money invested. When the company uses more leverage or debt financing it is more risky of firms. The financial leverage also very beneficial for success of the company. According to Moballeggi and Moghaddam (2002) financial leverage describes the main role of the company and it also improves their performance and its relationship between debt and return on assets also significant of the firms. In simples words firm with high level of debt are more profitable for firms. Berger and Bonaccorsi (2006) define the concept of financial leverage, when a small firm uses the more debt financing it also improve their capital structure and the company performance associated with higher efficiency and higher performance.

Thaddeus et al (2012) also define the concept of financial leverage and financial performance of the company to achieving the maximization of shareholder wealth and define debt and equity of the firms, debt use as a capital for company that loaned by other parties and company must be paid to other company and equity made the investment by owners or shareholder that is main and regular source of capital for companies. Debt and equity have other inputs that are labour, equipment that have a cost. The financial leverage of the firms is mixtures of long term debt and equity of the company.

According to Matt (2000) in financial leverage firms is used more debt and equity to improve their company performance. When small and large firm increase the value of performance then the financial leverage also increases. Mostly company's management prefers equity financing because it carry the low risk. Pandey (2010) financial leverage also employed by the company to increase the return on the fixed charge fund and also their cost of the firm. The surplus money and deficit money also increase or decrease the owner equity of the firm. The owner equity rate of return is more levered than above and below of total assets also improved. The debt financing also called the double edged sword because financial leverage provide the strength to increase the shareholder return and also increase the earning of the firm and minimize the risk of the firm. Andy et al. (2002)

examine that financial leverage is form of loan and borrowed money which is use for investment and invested money provide the more return on invested money. Mostly leveraged companies make the ownership of the debt and equity and unlevered firms uses all equity of the firms, leverage also allow to the investor a greater return of investment that would be available but also a greater potential loss. If the investment of company worthless then the principle loan and interest loan of the firm still repaid for the company.

A company can use the leverage to increase the financial performance of the firm and also identifying the optimal ratio of debt and equity of the firms. Leverage growth also lead to the financial structure that use to tax saving and interest expense deductions for companies. According to Brezeanu (1999) financial leverage increase the financial performance of company and also increase the financial efficiency that depends on return on assets, return on equity and it also improve the performance of the company. According to Pachori et al, (2012) financial leverage is a speculative method to identifying the special risk and cost that involved with the financial leverage of the company. Indeed the strategy of the financial leverage will not be successful during the period of the company which it is employed. Hamada (1972) determine the firms across industry and establish the equity cost and leverage relationship of firms and also define when company uses leverage more than preferring unlevered capital structure then firm observed more variations.

Financial leverage also allow the high level of shareholder return to obtain the firm debt and equity but if the debt financing is low than it exposed the higher risk and loss for company. Thus the company management may lead to restricting the loans and mostly firm's financial and operating leverage is equal to the company product (kumar 2014).Mandelker and Rhee (1984) define in the capital structure mix when company has a higher degree of operating leverage firm exposed the influence at some scale and less debt parentage and vice versa and industry belonging the perception of the debt financing of market decision key role playing the allowing the finance for firms and leverage ratio has been proved for industry in reserve case. Jelinek(2007) define if the firms increase the financial leverage gradually and then the leverage compared with same period of the financial leverage and financial performance managements. Faulkender and petersen (2005) examine that the larger firm are less leverage by using wide magnitude and firms also increase their market value through leverage and the value range of larger firm's also increase the value the leverage of 3 percentage of point.

Tamani (1980) also represent the financial leverage and financial performance and suggest the short term financing is favorable for small firm from bank and non-banks loans and big enterprises use long term financing as well as short term funding for tendency. Li (2005) define that the small firms accessing the long term debt that are beneficial for different sizes of large economies and large and medium term firms also uses long term debt for fast growing economies and Li also suggest long term debt financing might be hurt small firm in regional economic development but most firms uses less long term debt financing in developing countries than developed countries because every countries have a different characteristics in credit market.

According to Rajan and zngales (1995) define the concept of stock leverage of liabilities and assets. It claim that stock leverage is alternative for equity holders but also define stock leverage is not a healthy indicator to predict the default risk in future. The financial leverage explained in various ways with tangled thoughts and explains the concept of market leverage and book leverage, market leverage is favorable for forward looking leverage structure while the book leverage is favorable for backward looking measures. Myers(1977) define more about the market and book leverage and determine that book leverage is more important than market leverage when financial leverage analyzing and fluctuation of the market is greater deal and equity swings. Welch (2004) also describe the book value of debt is not relevant about the liabilities and assets when take place the book value of the debt. Frank and Goyal (2009) also describe the further concept of market leverage and book leverage. According to frank and Goyal market leverage forward looking measures more powerful than backward looking measures and mostly firms choose the market leverage than book leverage for high market to book ratio and also explain it provide more clearer understanding of financial leverage.

Friend and Hasbrouck (1988) define the characterizer of debt and leverage behavior and also suggest that if the firm increase the level of financial leverage then fixed obligation also increase. In existing literature three different debt measures short term, long term and composite debt determining the financial leverage. Therefore the suggestion of frank and Goyal (2009) providing the reliable and consistent finding when the financial leverage variation capturing for overtime. Therefore four different leverage proxies apply on book leverage and market leverage.

Mackey and Philips (2005) also check the relationship of book and market leverage and define the book leverage measure through total debt and total assets of the company and it also measure through preferred stock and deferred tax. Jensen (1989) argue that high level of debt may be different from low level of debt form inability to make the fixes payments and two main scenario discuss lead to liquidation and restructuring. Firm takeover pressures force to increase the leverage and manager also increase their debt for future payments cash flow as a restructuring. Firm make the unattractive to raiders (zwiebel, 1992).Bernanke and Whited (1990) observed that the activity of restructuring had a cross-sectional impact about the leverage and it provide the general observation about the financial leverage when firm increase the leverage and risk of bankruptcy also

create the big problem like cost of payment and others costs.

The financial decision of the company clearly determines capital structure has a considerable impact on company current and future performance. They also improve the potentially profitability of the company through financing via liabilities. According to Benjalux (2006) the performance of the company is a life blood of any economic units of the firms and without performance no good decision can be made in any firm. The most important of the economic units of the firm is a measuring the financial performance. Financial performance also used to evaluate the success of the company and economic units to achieving the strategies, objectives and critical factors of the company. According to katja (2009) it is very essential to management to increase the final outcome of the company and the financial performance key role play and it also achieved the authority and responsibly of the firm through individual or group performance and it also increases the company morale ethics. The performance of the company also manages the company resources and also improves the competitive advantage of the company.

Bhunja (2010) also measure the financial performance and determine the financial and operating characteristics also increased the efficiency and performance of the company and also increased the economic units that reflected the financial reports and financial records. Dick & Wang (2000) determine that measuring the financial performance ratio analyses is key role play and also increase the economic units.to determine the firm current and past performance ratio analyses commonly used and also used the for economic units to assess the sustainability. According to periasamy (2005) also examine that liquidity, profitability, solvency and company performance also measure though ratio analyses and it also provide management responsibilities for company. The firm's financial performance and profitability is very vital role play in any economic. Firstly the firms profit means the income of the shareholder and hence the multiplier and spillover effect of individual, household the general economy. Secondly the government will earn corporate taxes, infrastructure projects, and social welfare programs to enable the implementation. Thirdly the firm earns more profit to attract the more investors and increasing the larger capital for projects for high return. Finally the profitable firms creating more opportunities of employments to lead the poverty reduction of peoples.

The measurement of the firm's performance of what has been achieved by the firms and which is the best indicator for good condition of the period of time. The main objective of the measuring the firms performance the flow of funds, firms finance usage and their efficiency and effectiveness. Besides the manager of firms takes the best decision for information of the firm's performances. Firms also follow the many factors that effects the performance of the company size, management competence index, liquidity, leverage and company age (Almajali et al, 2012).Profitability is play key role for enterprising the firms. Through profitability the investors buy the more company shares because company enhanced their reputation. If the company shares demand increase in the market then it also increase the shares prices and also increase the value of the firm. Though profitability the company also enhance the firm stability and negative economic shock and profitability also increase the shareholder through dividend and also increase the stakeholder and firm value through corporate social responsibility (Bhutta & Hasan 2013). Proposed 2.1 Hypothesis

- There is a positive and significant impact of debt ratio (DR) on return on assets (ROA) of pharmaceutical listed companies in Pakistan.

3. Research Methodology

The purpose of this research to determine the impact of financial leverage on financial performance of pharmaceutical listed companies in Pakistan during the period of 2005-2014. According to Saunders, Lewis and Thornhill (2009) there are three types of studies named as explanatory, exploratory and descriptive. Causal research is used in this research design because it shows the causal relationship between the dependent and independent variables. There are two common research methods used in the various studies named as qualitative and quantitative. Quantitative is the one which focus on numbers and how to analyse and interpret them. On the other hand qualitative is a method that focus on words and in depth understanding of the subject Basic difference between two methods is that one focus on empirical results while other focus on interpretation of results (Bryman& Bell, 2007). In this research we used quantitative method and quantitative research approach is the numerical representation that focuses on measuring positivist and objectivist of social reality (Wood and Welch, 2010). The unit of analysis the pharmaceutical listed companies in Pakistan during the period of 2005-2014 and the data will be collected from the annual reports and financial statements. The study is quantitative in nature and panel data collected from annual reports of pharmaceutical listed companies in Pakistan during the period of 2005-2014.

$$ROA = \beta_0 + \beta_1 (DR) + \beta_2 (CR) + \beta_3 (SI) + \beta_4 (AT) + \epsilon$$

The target population of this research is total pharmaceutical listed companies in Pakistan and the total pharmaceutical companies consist of 9 firms and we select the whole population for conducting the research also called the census. The table below shows the study population as take the from Karachi stock exchange of Pakistan.

4. Results and Discussion

Table 4.1 explains the summary of descriptive statistics of all selected predictors used in this study. It indicates the mean and standard deviation value of all variables of listed pharmaceutical companies during the period of 2005- 2014. In this table the mean value of return on assets (ROA) is 13.48109 with the value of standard deviation 10.98539 and the mean value of debt ratio (DR) is 4.735914 and the value of standard deviation 2.37838. The mean value of current ratio (CR) is 2.3370 and the value of standard deviation 1.02011. The mean value of size (SI) is 5.8562 and the value of the standard deviation is 1.72579. The mean value of assets turnover ratio 1.3964 and the standard deviation value are 0.32613 and the maximum mean value is 36 and the minimum value of mean is -20. High standard deviation means that different have a marginal difference and company spend more debt to new assets. And lowest standard deviation found in return on assets with the value of (.490) explains the consistency of return on assets.

Also, Table 4.2 constitute the values regarding the relationship among dependent and independent variables .Return on assets (ROA) is positively and significant correlated with debt ratio (DR) with the value of .348 and the value $p = .001$. Which indicate the pharmaceutical companies uses more debt for increase the financial performance of the company. The return on assets (ROA) is also positively and significantly correlated with current ratio and size of the firm with the value of $CR = (.427)$ and the value of $p = .000$ and the value of $Size = (.474)$ and the value of $p = .000$ and the return on assets (ROA) is negatively correlated with asset turnover with the value of $-.038$ and the value of $p = .723$.which mean large size firm use more debt and current assets to increase their performance.

Regression analysis is a statistical method to measure the impact of one (independent) variable on other (dependent) variable. Therefore, this study uses regression analysis to test the hypothesis H1 to measure the impact of financial leverage on firm performance of pharmaceutical companies in Pakistan. As above table are indicates the regression analysis between dependent variable (debt ratio) and independent variables (return on assets). Table 4.3 indicates that In H1 the value of β_1 is .261 (Which is positive), T-Value is 2.788 (which are more than standard 2.00) and P-value or significance level is .007 (Which is less than 0.05) that show the debt ratio (DR) and the return on assets (ROA) is a positive impact. The value of β_2 is .489 (Which is positive), T-Value is 5.935 (which are greater than standard 2.00) and P-value or significance level is .000 (Which is less than 0.05). The value of β_3 is .356 (Which is positive), T-Value is 3.855 (which are more than standard 2.00) and P-value or significance level is .000 (Which is less than 0.05). The value of β_4 .011 (Which is positive), T-Value is .135 (which are less than standard 2.00) and P-value or significance level is .893 (Which is more than 0.05). The result also indicated that the independent variable debt ratio (DR) in aggregate were significant predictors of return on assets (ROA) explaining 46% of variance, $F = 18.681$, $p < 0.05$. Current ratio ($\beta_2 = 5.935$, $p < 0.05$) also have significant positively impact on return on assets which indicate current assets increases the performance of the company, meanwhile $\beta_3 = 3.855$, $p < 0.05$) Size also have positively significant impact explaining large size firms are much more stable to use the large amount of debt and $\beta_4 = .135$, $p > 0.05$ asset turnover show the insignificant impact on return on assets.

5. Conclusion

The study examines the impact of financial leverage on financial performance of listed pharmaceutical companies in Pakistan during the period of 2005-2014. The dependent variable of the this study is return on assets (ROA) and independent variable of this study is debt ratio (DR) and current ratio(CR), size and assets turnover (AT) are taken as an control variables. Secondary data was collected from Annual reports and financial statement of pharmaceutical companies. The quantitative method use in this research and achieving the aim of this research linear regression analyses used to determine the impact of financial leverage on financial performance of pharmaceutical listed companies in Pakistan during the period of 2005-2014 and descriptive analyses have been done to dependent and independent variables and then check the correlation of independent variables and the study find the there is a significant positive relationship between debt ratio and return on assets and The result also indicated that the independent variable debt ratio (DR) in aggregate were significant positively predictors of return on assets (ROA).

This research also show mostly firms use the external fund (debt) to improve their performance. Therefore the pharmaceutical companies prefer the mostly debt to improve their financial performance. There are many studies conducted about financial leverage and financial performance in different countries of the world. The findings of this study are similar with the findings of Joshua (2005) who conducted research on debt ratio and returns on assets and found the result of debt ratio and return on assets has a significant positive relationship with firm performance. Hall and Leonard (1967) also describe the debt has a significant relationship with profitability and also define debt and equity both are influences the decreasing the firm risk and increasing the firm profitability. Margarita and Psylski (2012) also work on financial leverage and firm performance and suggest that the relationship between financial leverage and efficiency is positive and significant and show the leverage

and efficiency relationship is more serve with high leverage.

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Table 1 : Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	90	.20	36	13.47	10.986
DR	90	1	15	4.77	2.441
CR	90	1	5	2.24	1.074
Si	90	1	7	5.82	1.745
AT	90	1	2	1.39	.490

Sources: Compiled SPSS result Version 20

Table 2: Correlation Analysis

	DR	CR	SI	AT	ROA
DR	1				
CR	0.189	1			
SI	0.503**	0.028	1		
AT	0.688	0.188	0.09	1	
ROA	0.348**	0.427**	0.474**	-.038	1

Sources: Compiled SPSS result Version 20

Table 3: Regression Analysis Summary for Predicting (ROA)

	Value	S.E.	T
C (Constant)		5.426	-3.275
DR	.261	.432	2.788
CR	.489	.887	5.935
SI	.356	.587	3.855
AT	.011	2.726	.135
R ²	.468		
F	18.681		
P	.000		

Sources: Compiled SPSS result Version 20