

## Investigate the Determinants of Capital Structure and Investment Decisions

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### Abstract

*Considering the importance of capital structure for the investment decisions this study analyzed the relationship between capital structure and investment decisions in the presence of some control variables. The study is conducted by using firm specific factors that are used in deciding the determinants of capital structure and investment decisions. The corporate sector is working in any country with an objective to maximize the shareholder's wealth and firms' value which is possible only with positive return investments. The study is helpful for the financial managers in making decisions that how capital structure can be crucial element while making future investment decisions .it will also help the investors to understand the capital structure of the company in which they are going to invest their money.*

### Introduction

In 1958, Modigliani and miller presented a theory according to that firm's performance is independent of its capital structure. So a firm with 100% debt financing or 100% equity financing will have no effect on the ultimate goal of firm (to maximize the shareholder's wealth). although this was first contribution in capital structure theories of business organization but this was based upon some unrealistic assumptions that's why this proposition has been criticized widely .due to heavy criticism on their relevance proposition of mm theory (irrelevance proposition), Modigliani and miller presented their corrected version in 1963 in which they encouraged firms to use debt financing option due to tax benefits attached with it. According to this correction, firms are encouraged to use the debt finance in the operations but there should be certain limit on the use of debt as it will have negative impact more than that of positive effects. In this regard, further extension of capital structure theories was provided by Myers and Majluf (1984) and Myers (1984). They have

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introduced the concept of asymmetric information and imperfect market situations and encouraged the use of debt in capital structure.

According to Nivorozhkin (2004), first priority of all firms is to have excess internal generated funds to opt an investment opportunity from the market and in case internal financing is not enough only then external financing (debt) will be opted. Many studies have been conducted in different regions to prove the relationship between investment and capital structure decisions but no optimal debt ratio has been given by the researchers to have benefits of debt financing into the business organizations. This study will be used as a tool for the financial managers of textile sector and investors to understand the importance of capital structure. This study is providing a base in developing countries for further research in optimal capital structures and investment decisions.

### **Literature Review**

Capital structure has major two classifications i.e. debt and equity financing. according to Kochhar (1997) debt holders have superior position in business organizations and they enjoy safe place because they are at superior position at the time of claim in the organizations. on the other hand they have very less control over the operations and management of the business entities because they do not hold any sharing rights of ownership (Kochhar 1997). MM (1958) had provided the base for the use of debt financing in the business decisions and claimed that it is a cheaper source of financing as compared to the equity financing in which ownership is shared among the shareholders of the companies but at the same time they claimed that there must be a specific percentage of use of debt financing to avail its positive aspects. on the basis of limited use of debt financing Miller and Modigliani (1958) criticized MM theory (1958) and as a result of this MM presented their corrected version of previous paper in 1963. MM theory (1963) basically was an effort to make correction in irrelevance proposition where it was claimed that capital structure decisions have no effect on firm's performance. They (MM1963) rectified the previous claim and said that business organizations can have tax advantages with the use of debt finance option in its capital structure (Muneer et al., 2013).

Kane Marcus and McDonald (1984) and Brennan and Schwartz (1984) provided the base for the dynamic tradeoff theories. They have introduced the concepts of tax advantages, uncertainty and bankruptcy costs but they ignored the important concept of transaction cost. Another important contribution in this regard is by Kane et al. (1984), Fischer et al. (1989), Modigliani and Miller (1958) and Kraus and Litzenberger (1973).

According to these authors cash flow can be used as exogenous variable in the investment making decisions.

Acceleration theory of investment is presented by Clark (1917) and to this theory flexible nature of price quality is assumed to be constant. This is the most important assumption of this theory and in the absence of this assumption the price of investment will be dependent on prices of inputs outputs and current interest rate in the market. To Bin'sq theory of investment was presented by Brainard and to bin (1968) and to bin (1969). Asper this theory firms usually make investments process to go on until and unless the cost of further assets is equal to the replacement cost of these assets. Liquidity theories of invest me a represented by Faz Zari Hubbard and Petersen (1988) . These theories have the major assumption that is imperfect capital markets and information asymmetry prevailing in the market especially in financial and non-financial markets

Aivazianetal. (2005) have tested the impact of debt ratio on investment decisions in Canadian listed firms. They also proved that debt is playing the disciplinary role in all those firms who have less investment and growth opportunities in the market. Another study conducted by Yuan and Moto has hi (2010) also confirmed the results on Chinese stock exchange.

They claimed that less growth company has higher debt ratio as compared to the higher growth companies.al-shubiri (2011) proved that bank ratio has negative impact on investment decisions. He also proved that companies with more internal generated cash flows and high value of to bin'sq will have more investments as compared to the companies with less amounts of cashflows. Jangili and Kumar (2010) conducted study to check the determinants of investments in Indian market and they proved that firm's size debt ratio cash flow and growth are the important factors while making investment decisions in India. All these variables are positively related with the investment decisions of firms but dividend payout and effective borrowing cost are negatively affecting the investment decisions. Arikawa Miyajima and Saito (2003) have conducted the similar study in japan. Another study conducted in the same area is by Muramatsu (2002) has also conducted the study in the similar pattern of analysis conducted by Jensen (1986) and cited by Yuan and Moto has hi (2005).

### **Methodology**

In order to conduct the study to check the hypothesis and to answer the research question textile sector of Pakistan is selected as a sample for the study. Among all the companies total 49 companies have been selected

(listed on Karachi stock exchange) to get the answer of the research question of the study. The data is collected from annual reports of the respective companies and Karachi stock exchange. Time span of the study is from 2009-2013. A total of five years have been selected to get the data about required variables from the selected companies. In order to check the capital structure and investment relationship firms from textile sector is selected only because the objective of the study is to check the impact of debt financing on investment decisions of textile sector firms (listed on Karachi stock exchange). Moreover combine results of all sectors cannot be applied on each sector that's why separate study is conducted on textile sector. In addition to this textile is the major sector of non-financial market (corporate sector) and contributing major percentage of GDP of Pakistan so policies and decisions of investments should be checked independently for this sector to make the required changes in it.

## Results

Table 1: Correlation Analysis

	Investment	Leverage	Cash flow	Growth	Size
Investment	1.00000				
Leverage	-0.53490	1.00000			
Cash flow	0.06910	-0.08710	1.00000		
Growth	0.36690	0.22320	0.46950	1.00000	
Size	0.28830	0.08930	0.38130	0.22410	1.00000

Correlation analysis is a measure to check the linearity relationship among the variables. Through correlation analysis it is very easy to check the relationship among variables and to judge that which of the variables are providing spurious results. From table 2 of correlation it is evident that there exists a relationship between investments of the companies and leverage ratio. There is negative relationship between investment and debt ratio of textile sector of Pakistan. All results are significant at 5% level of significance. From the results of correlation matrix it is evident that all selected variables (cash flow growth of firms and size of these firms) are positively correlated with the investment decisions of the firms except leverage which is negatively associated with investment decisions.

After univariate and bivariate analysis the relationship between investment and debt ratio is also checked through regression equation. To test the equation under OLS it is necessary to fulfill all its assumptions. Two most important assumptions of OLS which are known as homoscedasticity and there must not be serial correlation among the

variables. In the absence of these assumptions the results cannot be generalized and will not be efficient. To cater these issues in the data panels corrected standard errors model is applied on the data. The results of regression are given below:

Table 2. Regression result

Panels:		Correlated(balanced) No autocorrelation				
Autocorrelation:=135.35		Prob >chi2				
Waldchi2(4)						
R-squared		= 0.5060				
	Coeff.	Std. Err.	Z	P> z	[95%Conf. Interval]	
Investment C	0.1698201	0.1485455	7.88	0.0000***	0.87868	1.46096
Leverage	-0.3599234	0.0436229	-8.25	0.0000***	-0.27442	-0.44542
Cash Flow	0.9462731	0.1442219	6.56	0.0000***	0.6636	1.22894
Growth	0.0376928	0.0058847	6.41	0.0000***	0.0492	0.0262
Size	0.0563029	0.0092189	6.11	0.0000***	0.0744	0.0382

\*\*\* are respectively for 5% level of significance

Table 2 shows that leverage is significantly and negatively related with investment decisions of textile sector. This relationship is significant even at 1% level of significance as evident from the p-value of the table so it is also significant at 5 and 10% level of significance. The value of coefficient of leverage depicts that if there is 1% increase in the value of debt the investments will have negative effect up to 36%.

There is positive and significant relationship between cash flows and investment decisions of the firms listed in stock exchange under textile sector of Pakistan. This relationship is also significant at 1% level of significance. In addition to this the value of coefficient of cash flow is very strong which shows that cash flow is an important control variable to check the relationship of investment decisions and leverage. Here the p-value of the cash flow is again 0.0000 and shows that if there is 1% increase in the cash flow of the firms the investment decisions will boost up to 95%.

In case of growth of the firm again it proved a significant variable in determination of relationship between investment and leverage level of firms in textile sector of Pakistan. The p-value is 0.0000 which means that this is significant variable at 1% level of significance. And the value of coefficient is 0.0376928 which means that 1% change in the growth of the firms will have 3.8% changes in investment decisions positively.

Firm size and investment decisions are also positively related with each other moreover this relationship is also significant as the p-value is 0.000. This relationship is also significant at 1% and 10% level of significance. The value of coefficient is 0.0563029 which means that 1% increase in the size of the firms will have 6% increases in the investment decisions of the firms.

### **Conclusion and Recommendations**

Cash flows have been a prominent variable in making investment decisions and same results have been provided by Yuan and Motohashi (2010) and al-Shubiri (2011) in their studies. Aivazian et al. (2005) and Pietro Vito (2009) have proved in their studies that growth has positive and significant relationship with investment decisions of firms and same results (positive and significant relationship) have been proved by the study. The study is conducted under the presence of some conditions which can be removed in future studies. Timespan of the study is limited to five years which can be extended to the availability of the required variable's data. Debt can be beneficial for firms because it has positive and negative aspects attached with it. Management of the firms should make rational decisions while going for investment financing. Positive aspects of debt financing should not be ignored so management should make the use of debt finance option into business up to the level where positive benefits of this option can be achieved. All variables (selected for the study) are proved to be the important determinants of investment decisions but still there are some factors that can enhance these decisions i.e. macroeconomic factors. To enhance the financing and investment decisions firms should also consider these factors. Furthermore there are some other firm specific factors which can be considered in the future study to enhance the investment decisions.

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