

Identification of Factors Leading the Decision of Financial Manager towards Financial Leverage

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The objective of the study is to understand the perception of financial managers of the firms towards factors affecting the decision of financial leverage. This study evaluates the influence of various factors on financial leverage of the firm. The study was conducted by taking 151 respondents from Delhi/NCR area. This study is based on pilot survey and the purpose of the study is to check the validity of the questionnaire for further research work. A self-prepared questionnaire was constructed and distributed to Chartered Accountants, CFAs, Financial Managers and Financial Executives of various firms. Factor analysis was used as a research technique to ascertain the leading factors of financial leverage decision of the firms. The output of the study revealed that Assets Composition, Tax Shield, Operating Income, Investor Protection and Corporate Governance are the major factors which influence the decision of financial managers towards financial leverage of the firm.

Keywords: Financial Leverage, Profitability, Firm Size, Corporate Governance, Collateral Value of Assets, Tax Shield.

1. Introduction

IN current scenario, the intensity of competition is very high. It is a very complex decision for a finance manager to enhance the profitability of the firm. For this a finance manager has only two options: *first* is to increase the revenue by improving the sales output (volume of sales or increase in selling price) and the *second* is to cut down the cost of production. The firm cannot reduce the amount of cost of production by cutting the direct cost like: labour, material, etc. So it becomes very important for a Manager/Owner to reduce the cost of borrowing. A manager needs to look forward to various sources of long-term finance and its cost. Accordingly, he needs to

decide a balanced capital structure for a firm so that the cost of capital structure can reach to the lowest level. Capital mix include issue of equity shares, preference shares, debentures, bonds, loan taken from banks/financial institution and retained earnings. Every source of finance has its own cost. Thus, it is very important for a firm to choose such a capital mix where the overall cost of capital is low and the valuation are high. Financial leverage is judicious use of equity and debt in the capital structure so that the profitability can be increased.

There are so many items which are financial and non-financial in nature considered by finance managers which influence the leverage of the firm. This study has been conducted to measure the influence of size of firm, liquidity, tangibility, interest rate risk, cost of capital, operational efficiency,

profitability, tax rate on corporate, tax shield, age of business, macro-economic uncertainty, etc. on the decision of capital mix of various companies in Indian context.

2. Objectives of the Study

- (a) To scrutinize the parameters of capital structure decision of the firms.
- (b) To study the factors affecting the managerial decision towards financial leverage of the firms.

Hypothesis Framed

H01: There is no significant influence of Valuation of firm on Financial leverage Decision.

H02: There is no significant influence of Cost of Finance on Financial leverage Decision.

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- H03:** There is no significant influence of Tax Shield on Financial leverage Decision.
- H04:** There is no significant influence of Operating Income on Financial leverage Decision.
- H05:** There is no significant influence of Assets Composition on Financial leverage Decision.
- H06:** There is no significant influence of Investor Protection on Financial leverage Decision.
- H07:** There is no significant influence of Corporate Governance on Financial leverage Decision.
- H08:** There is no significant influence of Environmental Risk on Financial leverage Decision.

3. Literature Review

Modigliani and Miller (1958) indicated that equity and debt are used to play down overall cost of capital, as interest on debt expense comes under tax exemption; interest on debt is cheaper than the cost of equity. So, corporate carry a certain portion of long-term sources of finance in the capital mix to reduce overall cost and to increase the profitability and valuation of firm.

Corporate taxation has a significant impact on debt-equity mix. though, the tax protect proposal of Modigliani and Miller (1958) suggested that the companies falling under higher marginal tax rates should use more long-terms sources of finance,

whereas Biger *et al.* (2008) disagree with the proposal of Modigliani and Miller. Biger *et al.* may be right because in India, small business owners mostly sponge interest free money from family members and friends.

La Porta *et al.* (1999) described that financial markets also require protection of outside investors. They made a conclusion that political interference played an important role in investors' protection in some countries. They argued that legal approach can be the better way to understand reforms in corporate governance.

Bancel and Mittoo (2004) made a primary study to find the determinants of capital structure of European firms. They surveyed 16 European countries and came up with the results that firm's financing policy is influenced by legal environment, institutional environment and their international operations. The financial flexibility and EPS are the major factors while issuing common stocks and debt.

Ebaid (2009) studied the Egypt companies to find out the relationship between choices of capital mix and performance of the companies. Company performance was considered by the following ratios: Gross profit margin, Return on Equity and Return on Assets. Capital mix was measured by proportion of short-term debt to asset, long-term debt to asset ratio and total debt to total assets. Multiple regression technique was applied to study the association between the financial leverage and performance of firms. The results discovered that the performance of

firms does not affected by capital structure decision.

Moradi Mehdi *et al.* (2010) studied the relationship between coefficients of earning response with financial leverage in the course of an income approach. The purpose of the research was to collect the details about the various determinants which may have influenced the earnings response coefficient. The study was based on companies listed on the Stock Exchange of Tehran. The data points have been figured from 2002 to 2008. Multiple regressions was used as statistical technique for data analysis and study revealed that coefficient of earning responses were different for low leverage and high leverage firms.

Short *et al.* (2010) conducted a study to find out the relationship between agency costs of debt and equity and presence of external shareholders. They studied two aspects of ownership: equity ownership by management and equity ownership by large external shareholders. The study revealed that there was a positive relationship between debt ratio to management ownership and negative relationship between debt ratios to ownership by large external shareholders.

Pal and Verma (2011) observed the factors impacting the capital mix decision in manufacturing industry in India from 1995 to 2008. He used regression and panel data analysis due to time series data. The results showed two sided results that the capital structure of the selected companies gets affected by Tangibility, growth rate, cost of debt, profitability and

firm size whereas liquidity and corporate tax had insignificant impact on capital structure decision. Researcher also observed that firms prefer retained earnings for capital over debt funds in the case of high growth.

Jain *et al.* (2012) conducted a research on IT and Infrastructure companies to study the impact of financial leverage on capital composition and its cost. 20 companies were selected as the sample of the study. A negative relation was found in Infrastructure firm between financial leverage and overall cost of capital and in IT firms, the results were totally different i.e. employment of less long-term sources of finance in capital structure shows positive relationship between cost of equity and financial leverage, combined leverage and weighted average cost of capital.

Akhtar *et al.* (2012) investigated the influence of trading on equity on the performance of selected firms in Pakistan with respect to fuel and energy sector. The study revealed that firms who choose high leverage may have higher profitability.

Ojo (2012) studied the relation between indicators of corporate performance with financial leverage in Nigeria. Correlation and regression model was used by the researcher to demonstrate the substantial effect of leverage on financial performance. The result showed that leverage has no direct relationship with earning per share and net assets per share.

Anandasayanan *et al.* (2013) studied over a sample of 60 firms including a period of 5 years from 2007 to 2011, listed on stock exchange of Sri Lanka. He considered 5 variables into reflection of study - Size of Company, Non Debt Tax Shield, Profitability, and Growth of Firms and Tangibility as Determinants of Leverage. Results showed that all determinants have significant influence on firm's leverage and company can influence its market value by increasing profitability due to change in capital structure.

Zafar and Maqbool (2013) studied the impact of financial leverage on return on shareholder's wealth on real estate companies in India. They selected the sample of 30 companies covering the time period from 2001 to 2008, listed on Bombay Stock Exchange. The study was based on several independent variables like growth in sales, dividend payout ratio, return on capital employed and Interest coverage ratio, growth in earning per share, growth in total assets and growth in dividend per share.

Khan *et al.* (2013) selected 34 firms from chemical and pharmaceutical industry covering the time period from 2003 to 2010 to study the impact of profitability and leverage on dividend policy. Regression was used to find the relationship between variables. Results showed a positive relation between dividend payouts and profitability whereas there was no effect of leverage on dividend payouts on selected companies.

Nirajini and Priya (2013) conducted a study on companies

listed in Sri Lanka Stock Exchange to examine the influence of capital mix over company's financial performance. The sample was drawn from Sri Lanka stock exchange from 2006 to 2010. Correlation was used to analyze the data. Results showed there is significant relationship between capital mix and companies financial performance. It was recommended by both the authors that an organization need to have a balanced capital mix to minimize the overall cost of capital for smooth operation.

Enekwe *et al.* (2014) studied the effect of Financial Leverage on financial performance of pharmaceutical companies listed on Nigeria Stock Exchange over a period of 2001 to 2012. He considered only 3 companies for sample size. The study involved 3 ratios Debt Ratio, Debt Equity Ratio and Interest Coverage Ratio as independent variables in regulating the effect on ROA as dependent variable. He used Ex Post Facto design for analysis. Correlation, Descriptive Statistics and Regression were used as statistical techniques to analyze data. The finding of the study reveals that there is a positive relationship between ROA and ICT whereas a negative relationship was found between ROA with Debt ratio and Debt Equity ratio. The study also explained that there is no significant effect of independent variables over financial performance on selected companies.

Srivastava (2014) conducted study to analyze the determinants of leverage on the companies in India from Cement sector. Ten

companies were selected as the sample for the study over a period from 2008–12. The result of the study showed negative correlation of profitability, size and liquidity with leverage and positive impact of tangibility on leverage.

Pandey and Prabhavati (2016) examined the influence of Leverage on shareholder's wealth of Automobile industry in India. 12 companies were selected as the sample for the study listed on NSE, Bombay covering the period of

2003 to 2013. Net Worth, Reserve Funds, Borrowing, Investments, Gross Fixed Assets are used as independent variables, while Operating and Financial Leverage were dependent variables. For analysis purpose multiple regression models was used. The result of the study showed that automobile companies in India should improve its operating efficiency by reducing the level of fixed cost.

Summary of factors which affects the company's financial leverage is summarized in Table 1.

4. Research Methodology

Methodology used for Data Collection: A self-prepared questionnaire was distributed to targeted sample size for data collection. Sample size was 151 and non-probability convenience sampling technique was used for study.

Methodology used for Analysis of Data: Multiple Regression was used to find out the impact of factors which affect the decision of finance manager while deciding financial leverage of the firm. Cronbach Alpha was used to check the reliability of the questionnaire and KMO Bartlett's test was used to check the sample adequacy. Stepwise Regression Analysis was used to check the model fit for best results (Figure 1).

Data Presentation and Analysis

Data Presentation: Data collected from the respondents have been tabulated by using MS Excel. Presentation of data was done on the basis of demographic variable (Table 2).

TABLE 1

FACTORS INFLUENCING THE DECISION OF FINANCIAL LEVERAGE OF THE FIRMS

S. No.	Author, Publication Year	Factors, Determinants
1.	La Porta <i>et al.</i> , 1997, 1999	Poorer Investor Protection, Less Protection for Minority Shareholders.
2.	Short <i>et al.</i> , 2002, 2010	Percentage of Share Held by Management, Ownership by Heavy Shareholders (External), Growth, Assets Composition.
3.	Bancel and Mittoo, 2004	Exchange Rate Risk, Interest Rate Risk, Marginal Tax Rate on Firm, Earning Volatility of the Firm, Investment Flexibility, Valuation of Equity.
4.	Pal and Verma, 2011	Liquidity, Corporate Profitability, Cost of Debt, Assets Composition, Firm Size, Growth, Corporate Tax.
5.	Khan <i>et al.</i> , 2013	ROA, Net Profit Margin, Assets Composition of Firm, DER.
6.	Srivastava, 2014	Firm Size, Growth, Profitability, Liquidity, Tangibility.
7.	Zafar and Maqbool, 2013	ROCE, DPR, GS, ICR, GEPS, GDPS, GTA.
8.	Pandey and Prabhawati, 2016	Reserve Funds, ROCE, ROD, Net Worth, Borrowing, Investments, ROE, Gross Fixed Assets.
9.	Akhtar, 2012	EPS, Sales as of Total Assets, Dividend Cover Ratio, Dividend Ratio to Equity, Net Profit Margin, ROE, ROA.
10.	Anandasayanan <i>et al.</i> , 2013	Profitability, Size of Firm, Growth, Tangibility, Non Debt Tax Shield.
11.	Nirajini and Priya, 2013	Margin of Gross Profit and Net Profit, ROE, ROCE, ROA.
12.	Enekwe <i>et al.</i> , 2014	ROA, DR, DER, ICR.

TABLE 4
RELIABILITY STATISTICS (FACTOR WISE)

S. No.	Name of Factors	No. of Statements	Reliability Statistics
1.	Value of Firm	5	.712
2.	Cost of Finance	4	.514
3.	Tax Shield	3	.672
4.	Operating Income	6	.696
5.	Assets Composition	4	.415
6.	Investor Protection	6	.747
7.	Corporate Governance	7	.812
8.	Environmental Risk	8	.666

TABLE 5
SAMPLE ADEQUACY TEST

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.785
	Approx. Chi-Square	4327.134
Bartlett's Test of Sphericity	df	1326
	Sig.	.000

TABLE 6
AVERAGE AND STANDARD DEVIATION FOR EACH INDICATOR OF FACTOR AFFECTING FINANCIAL LEVERAGE

S. No.	Indicators	Average	Std Deviation	Order/ Rank	Conformity Level
1.	Value of Firm	3.77	0.754	5	Medium
2.	Cost of Finance	3.93	0.611	1	High
3.	Tax Shield	3.91	0.798	2	High
4.	Operating Income	3.87	0.613	3	High
5.	Assets Composition	3.84	0.633	4	High
6.	Investor Protection	3.27	0.666	8	Low
7.	Corporate Governance	3.37	0.685	7	Low
8.	Environmental Risk	3.60	0.529	6	Medium

TABLE 7
MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1.	.634 ^a	.403	.398	.38730
2.	.711 ^b	.506	.499	.35341
3.	.744 ^c	.554	.545	.33700
4.	.764 ^d	.583	.572	.32682
5.	.771 ^e	.594	.580	.32356

a. Predictors: (Constant), Assets_Compo

b. Predictors: (Constant), Assets_Compo, Oprt_Incm

c. Predictors: (Constant), Assets_Compo, Oprt_Incm, Inv_Prot

d. Predictors: (Constant), Assets_Compo, Oprt_Incm, Inv_Prot, Tax_Shield

e. Predictors: (Constant), Assets_Compo, Oprt_Incm, Inv_Prot, Tax_Shield, Corpo_Gover

In the continuation of first phase, the correlation test is conducted on selected variables, whether they are correlated with each other. From the result we found that all variables are different to each other and there is no collinearity exists between all variables as all VIF values are less than 3 (Table 8).

Mathematical Equation of Regression Analysis for selected model of the study:

Affecting Decision of Financial Leverage = $\alpha + \beta_1$ (Valuation of Firm) + β_2 (Cost of Finance) + β_3 (Tax Shield) + β_4 (Operating Income) + β_5 (Assets Composition) + β_6 (Investors Protection) + β_7 (Corporate Governance) + β_8 (Environmental Risk)

Considering the results of multiple regression, the main hypotheses were tested as follows:

A positive relationship was found at significant level ($\alpha \leq 0.05$) of various factors on financial leverage decision, where f value reached (41.907) by statistically significant (0.00), R value reached (.771) and R² value reached (.594). So main hypothesis was accepted i.e. there are factors which affect the decision of financial leverage.

Interpretations: From the results (Table 9), we can conclude that there is a positive relation and significant impacts of various factors like: Tax Shield, Operating Income, Assets Composition, Investors Protection and Corporate Governance on decision on Capital structure of firm.

TABLE 8
RESULT OF MULTIPLE REGRESSION ANALYSIS CONDUCTED WITH 5 FACTORS

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta				Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	1.845	.196			9.431	.000	1.458	2.232					
1. Assets_Compo	.501	.050	.634		9.952	.000	.401	.600	.634	.634	.634	1.000	1.000
(Constant)	1.275	.206			6.188	.000	.868	1.683					
Assets_Compo	.333	.055	.422		6.042	.000	.224	.442	.634	.447	.352	.695	1.438
2. Oprt_Incm	.314	.057	.386		5.527	.000	.202	.426	.618	.416	.322	.695	1.438
(Constant)	1.061	.204			5.205	.000	.658	1.464					
Assets_Compo	.297	.053	.376		5.563	.000	.191	.402	.634	.419	.309	.675	1.482
Oprt_Incm	.249	.057	.306		4.406	.000	.137	.361	0618	.344	.244	.637	1.570
3. Inv_Prot	.184	.047	.246		3.946	.000	.092	.277	.513	.311	.219	.794	1.259
(Constant)	1.043	.198			5.272	.000	.652	1.434					
Assets_Compo	.254	.053	.322		4.753	.000	.148	.359	.634	.638	.256	.632	1.582
Oprt_Incm	.177	.059	.217		2.982	.003	.060	.294	.618	.241	.160	.544	1.837
Inv_Prot	.162	.046	.216		3.531	.001	.071	.252	.513	.282	.190	.775	1.290
4. Tax_Shield	.140	.044	.223		3.189	.002	.053	.226	.600	.257	.172	.590	1.695
(Constant)	1.019	.196			5.194	.000	.631	1.407					
Assets_Compo	.235	.054	.298		4.376	.000	.129	.341	.634	.344	.233	.613	1.633
Oprt_Incm	.163	.059	.200		2.753	.007	.046	.280	.618	.224	.147	.536	1.864
Inv_Prot	.113	.052	.151		2.201	.029	.012	.215	.513	.181	.117	.601	1.664
Tax_Shield	.128	.044	.204		2.918	.004	.041	.214	.600	.237	.155	.579	1.727
5. Corpo_Gover	.105	.053	.144		1.980	.050	.000	.210	.564	.163	.105	.533	1.875

a. Dependent Variable: Affect_FL

TABLE 9
SUMMARY OF HYPOTHESIS TESTING AND RESULTS

Hypothesis	Description	Sig Value	Status
H01	There is no significant influence of Valuation of firm on Financial leverage Decision	Factor removed from Model	Rejected
H02	There is no significant influence of Cost of Finance on Financial leverage Decision	Factor removed from Model	Rejected
H03	There is no significant influence of Tax Shield on Financial leverage Decision	0.000	Accepted
H04	There is no significant influence of Operating Income on Financial leverage Decision	0.007	Accepted
H05	There is no significant influence of Assets Composition on Financial leverage Decision	0.029	Accepted
H06	There is no significant influence of Investor Protection on Financial leverage Decision	0.004	Accepted
H07	There is no significant influence of Corporate Governance on Financial leverage Decision	0.050	Accepted
H08	There is no significant influence of Environmental Risk on Financial leverage Decision	Factor removed from Model	Rejected

Limitation, Future Research Directions and Conclusion

The sample size for the study was very limited (Only 151). The collections of respondents were also from Delhi NCR region. The research was done on a very limited sample size and the factors would be named after the completion of targeted sample size.

The current study will help to identify the factor which affects the decision of capital structure of the firms in India. The identified factors will act as a guideline for researchers and academicians for further research based on qualitative determinants also.

There are five factors which influence the decision of financial

manager of the firms while deciding capital structure of the firm and financial leverage as well. These are Assets Composition, Tax Shield, Operating Income, Investor Protection and Corporate Governance. The most significant factors out of five factors are Assets Composition and Operating Income.

The survey shows that more than 50 per cent of the respondents were male and fall in the age category of 25 to 40 years. 94 per cent of the total respondents were Chartered Accountants.

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