Capital Structure and Its Impact on Profitability of IFCI Ltd: An Empirical Analysis

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Abstract: In this paper an attempt has been made so as to ascertain the impact of capital structure on the profitability of a firm. This study is focused on Industrial Financial Corporation of India Ltd(IFCI Ltd). The reference period of the study is five years and is completely based on secondary data which has been collected through various sources. In order to achieve the objectives of the study, the researcher has employed the analysis of various ratios. The findings of the study have put forth that capital structure do have statistically significant impact on the profitability of firms. This paper provides valuable insights for the interested parties such as owners, shareholders, general public etc.

Keywords: Capital structure, Profitability, Debt-Equity Ratio, Pearson Correlation & Multi Regression Analysis.

I. Introduction

Capital is the financing for a business and is made up of, primarily, owner's funds and borrowers funds. The combination of the sources of business funding is referred to, as the capital structure of that business. In order to assess and manage risks, financial firms must have effective ways of determining the appropriate amount of capital that is necessary to absorb unexpected losses and contingencies arising from antagonistic factors. Soon after Independence India identified industrialization an associate for its economic development. That lead to the idea of promoting development banks. Industrial development and Industrial finance are essentially inseparable, without finance no industrial development can take place. Development banks are those which have been set up mainly to provide infrastructure facilities for the industrial growth of the country. They provide medium term and long term financial assistance for the expansion and growth of the needy industries.

Commercial banks provide assistance for working capital requirements, development banks provide long term financial assistance to the business firms thereby they contribute towards economic development of a country. It is a multipurpose financial institution besides providing financial help it undertakes promotional activities also.

Industrial Finance Corporation of India was the first institution of its kind and the role assigned to it was that of a gap-filler, which implied that, it was expected not to compete with the existing channels of industrial finance. It first started in the July 1948 as a statutory corporation which after 45 years turned in to a Public Limited Company i.e IFCI Ltd in July 1993. Short term and long term loans are an indicator of relationship between firm's performance and its capital composition. In recent times it has been going through a rough patch mainly due to the NPA problem which has been afflicting the whole sector.

II. Research Methodology:

Collection of Data and its Analysis method: The present study is based on the secondary data extracted from the annual reports of IFCI ltd from 2012-2013 to 2016-17 ,from which capital structure of the company has been taken. The collected data are computed and tabulated in the form of ratios. The ratios are analysed by using statistical tools and techniques namely Pearsons Correlation, Multi Regression Analysis. In order to the results, statistical software such as MS-Excel and R version 3.5.0 has been used. Charts and figures had been prepared for graphic view of the data.

III. Objectives of the Study:

The main objective of the study is to examine relationship between capital structure and profitability of IFCI Ltd through Earning Per Share and Return on Assets

IV. Hypotheses:

As a part of the study the following null hypothesis are to be tested:

1) No relationship between loan funds and profitability
2) No relationship between working capital ratios and profitability of the firm.

V. Capital Structure of IFCI Ltd:

Capital structure consists of share capital i.e Equity Shares, Preference Shares, Reserves& Surplus and Loan funds.
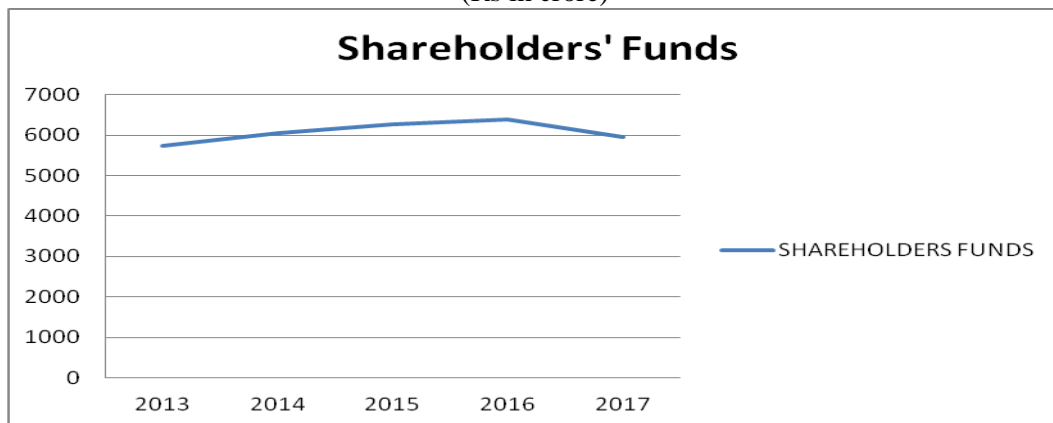
TABLE 1: SHAREHOLDER'S FUND OF IFCI LTD

(Rs in crores)

YEAR	SHARE CAPITAL	RESERVES &SURPLUS	SHAREHOLDER'S FUNDS	CHANGE(in times)
2013	1925.88	3818.06	5743.94	_
2014	1924.96	4135.48	6060.44	0.055
2015	1925.37	4333.84	6259.21	0.032
2016	1925.43	4466.27	6391.7	0.021
2017	1924.88	4021.24	5946.71	-0.069
AVERAGE	1925.304	4154.978	6080.4	0.00975

Source: Annual reports of IFCI 2013-2017 published by moneycontrol.com

FIGURE 1: TREND OF SHAREHOLDERS' FUND

(Rs in crore)

Source: Table 1 Shareholder's fund of IFCI Ltd

Table 1 depicts the trend in Shareholders' funds of IFCI Ltd. The share holders' funds increased from 2013 to 2016 and reached Rs 6391 crores from Rs 5743.94 crores but the percentage change gradually decreased from 0.055 times to 0.021 times in the year 2016.The values of share holders' funds decreased and reached Rs 5946.71 in 2017 where the percentage change moved to -0.069 times.
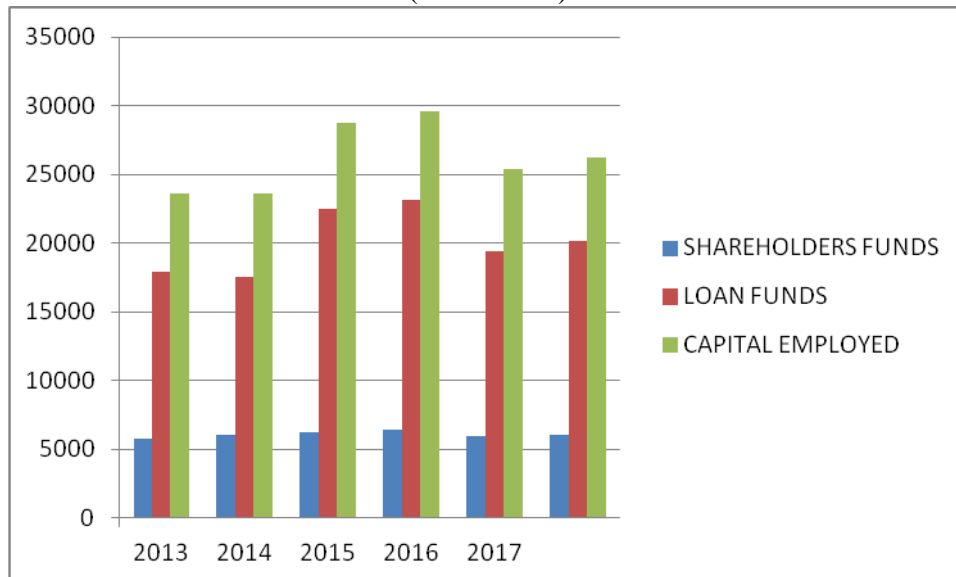
TABLE 2: CAPITAL EMPLOYED OF IFCI LTD

(Rs in crores)

YEAR	SHAREHOLDERS FUNDS	LOAN FUNDS	CAPITAL EMPLOYED	CHANGE(in times)
2013	5743.94	17915.25	23659.19	_
2014	6060.44	17590	23650.44	-3.69
2015	6259.21	22479.45	28738.66	0.2
2016	6391.7	23158.55	29550.25	0.028
2017	5946.71	19433.94	25380.65	-0.14
AVERAGE	6080.4	20115.438	26195.838	-0.9005

Source: Annual reports of IFCI 2013-2017 published by moneycontrol.com

FIGURE 2: CAPITAL STRUCTURE OF IFCI LTD
(Rs in crores)

Source: Table 2 Capital employed of IFCI LTD

Table 2 shows that the Loan Funds of IFCI Ltd. consists of Share holders' funds, Loan Funds and Capital Employed. It is clear that the solvency position of the firm was not upto the mark as the proportion of Shareholders' Fund was quite low than the Loan Funds. The proportion between Shareholders' Funds and loan funds is 1:3 (approx) which shows that majority of the capital was financed by Loan Funds. The changes in the capital employed are mostly result of the changes in loan funds.

VI. Financial Analysis

The table 3 shows various rations which help in determining the financial position of IFCI Ltd. Debt ratio measures the extent of compay's leverage Debt Ratio shows the ratio between loan funds and total assets. On an average, Debt Ratio is 0.3 times. The Debt ratio is highest in the year 2014 i.e 3.4 times and least is 0.27 times recorded in the years 2015 and 2016.

The proprietary ratio shows the contribution of shareholders in total assets of the company. A high proprietary ratio, therefore, indicates a strong financial position of the company and greater security for creditors. A low ratio indicates that the company is already heavily depending on debts for its operations. The average proprietary ratio is 0.228 times. The Proprietary ratio is recorded high in the year 2014 i.e 0.25 times and recorded least in the years 2015 and 2016 with 0.21 times. Proprietary ratio is less than Debt ratio in all the years. Debt to equity ratio indicates long term solvency ratio that indicates the soundness of long-term financial policies of a company. The average ratio is observed as 3.296 times while the standard ratio in 0.50:1.The Debt Equity ratio of the firm is in adverse situation, the ratio does not indicate sound solvency position of the firm. The current ratio measures a company's ability to pay their short-term obligations with their current assets. The average current ratio is 6.088 times which is above the standard norm 2:1 times. In the year 2013 current ratio is recorded much higher than the standard i.e 12.5 times .In the remaining years it fluctuated between 4.2 times to 4.9 times. This speaks that the company has blocked it funds in the form of current assets. The firm would earn a better profitability or rate of return if the same funds are invested in some other profitable avenues.

Current Assets to total assets ratio examines the extent of total funds invested for the purpose of working capital. It should be worthwhile to observe that how much of that portion of total assets is occupied by the current assets, as current assets are fundamentally concerned in forming working capital and also take an dynamic part in increasing liquidity of the firm. The average ratio is high i.e 0.864 times. The Current assets to Total assets ratio is recorded least in the year 2013 i.e 0.67 times. In all the year between 2014 to 2017 it is recorded high. Return on Assets is the profitability indicator of the firm which explains the relation between Net Income and Total Assets. The average ratio is recorded as 0.0176 times which is very low which mean the company is not making good amount of profits out of the total assets. The ratio is recorded in between 0.011 to 0.021 times in the period of study.

TABLE 3: FINANCIAL RATIOS OF IFCI Ltd.
(In Times)

Year	Debt ratio	Proprietory ratio	Debt-equity ratio	Current ratio	Current ratio to Total Assets ratio	Return on Assets	Earnings per Share
2013	0.32	0.24	3.11	12.5	0.67	0.019	2.71
2014	0.34	0.25	2.9	4.6	0.85	0.021	3.06
2015	0.27	0.21	3.59	4.91	0.91	0.018	3.14
2016	0.27	0.21	3.62	4.23	0.93	0.011	2.03
2017	0.3	0.23	3.26	4.2	0.96	0.019	-2.76
AVG	0.3	0.228	3.296	6.088	0.864	0.0176	1.636

Source: Annual reports of IFCI 2013-2017 published by moneycontrol.com

VII.   Impact of Capital Structure on Profitability of IFCI Ltd

The main objective of the study is to analyse the impact of capital structure on the profitability of IFCI Ltd. To determine the effect of working capital management on corporate profitability the researcher used the following equations [1]:

$$EPS = C_0 + C_1 SF + C_2 LF + C_3 CE + C_4 WC + U \ldots\ldots\ldots\ldots(1)$$
$$ROA = C_0 + C_1 DR + C_2 PR + C_3 DER + U \ldots\ldots\ldots\ldots..(2)$$
$$ROA = C_0 + C_1 CR + C_2 CATA + C_3 DER + U \ldots\ldots\ldots\ldots(3)$$

The equations are based on both relative and absolute figures. The first equation explains the eps while the second equation explains the DR,PR & DER impact on profitability while the last equation explain the impact of working capital rations of ROA.

Where:

EPS=Earning per Share, SF=Shareholder's Fund, LF=Loan Fund, WC=Working Capital, ROA=Return of Assets, DR=Debt Ratio, PR=Proprietary Ratio, DER=Debt Equity Ratio, CR=Current Ratio, CATA=Current Ratio to Total Assets Ratio, U=Undefined Variable and C_0=Constant of the regression equation and C_1, C_2, C_3 and C_4 are the parameters to be estimated.

VIII.   Correlation Matrix:

Correlation is a statistical techniques which shows the extent of association between variables. The Correlation Co-efficient lies between +1 and -1 which shows the degree of association between variables. The mostly widely used method is Pearson Correlation method.

TABLE 4: PEARSON CORRELATION WITH EPS

RATIOS	EPS	SF	LF	CE	WC
EPS	1.00	0.231	0.069	0.085	-.0106
SF	0.231	1.00	0.856	0.880	0.871
LF	0.069	0.856	1.00	0.995	0.961
CE	0.085	0.880	0.998	1.000	0.964
WC	-0.106	0.871	0.961	0.964	1.00

Source: Annual reports of IFCI 2013-2017 published by moneycontrol.com with help of R 3.5.0

Table 4 explains the correlation between EPS,SF,LF,CE and WC. The above table explains negative correlation between EPS and Working Capital similarly the correlation of EPS with Share holder's funds,Loan funds and Capital employed is very low. The low degree of correlation of EPS with SF LF & CE states that changes on the above variables could not bring an appropriate change in EPS. The correlation among Shareholders funds, Loan funds, Capital employed and Working capital is high with a range between 0.8 to 0.9.

TABLE 5: PEARSON CORRELATION WITH ROA

RATIOS	DR	PR	DE	CR	CATA	ROA
DR	1.00	0.997	-0.997	0.360	-0.546	0.737
PR	0.997	1.00	-0.998	0.360	-0.538	0.748
DE	-0.997	-0.998	1.000	-0.332	0.509	-0.771
CR	0.360	0.369	-0.332	1.000	-0.950	0.236
CATA	-0.546	-0.538	0.509	-0.950	1.000	-0.338
ROA	0.737	0.748	-0.771	0.236	-0.338	1.000

Source: Annual reports of IFCI 2013-2017 published by moneycontrol.com with help of R 3.5.0

Table 5 explains the correlation between DR, PR, DE, CR, CATA, ROA. There exists negative correlation of ROA with DE & CATA. Debt ratio is negatively correlated with Debt Equity ratio and CATA. Similarly Proprietary Ratio is negatively correlated with DE and CATA. Debt Equity ratio is negatively correlated with DR,PR & CR and ROA. Current Ratio is negatively correlated with DE & CATA. However CATA is positively correlated only with DE. The high degree of correlation of ROA with DE and PR shows that profitability of IFCI in the period of study is correlated with financial structure of the company.

TABLE 6: MULTI REGRESSION ANALYSIS RESULT OF EPS

Variable	Co-efficient	t-value	P value
Intercept	-59.2145	-1.219	0.437
SF	0.0116	1.121	0.464
LF	0.0019	1.042	0.487
WC	-0.0026	-1.530	0.369
Standard Error of Estimate		2.569	
Co-efficient of Determination (R Squared)		0.7353	
Dependent Variable		EPS	
Source: Annual reports of IFCI 2013-2017 published by moneycontrol.com with help of R 3.5.0			

Table 6 explains the impact of capital structure components on profitability with multi regression analysis as there are more number of independent variables and one dependent variable. In the above analysis capital employed is not taken into consideration as it a derived variable.Table6 explains that working capital is insignificant as the value in -0.0026.Share holders funds and Loan funds also have minor impact on the EPS the values are mere. For one unit increase in Share holders' funds and Loan funds profitability increased by 0.0116 and 0.0019 respectively, which are statistically insignificant at 5% level. Similarly one unit increase in working capital would decrease profitability by -0.0026 which is not statistically significant. The independent variables explain 73 % of the variations.

TABLE 7: MULTI REGRESSION ANALYSIS RESULT OF ROA

Variable	Co-efficient	t-value	P value
Intercept	0.7955	1.141	0.458
DR	-0.5142	-0.659	0.629
PR	-1.0142	-0.560	0.675
DE	-0.1190	-1.203	0.442
Standard Error of Estimate		0.003207	
Co-efficient of Determination (R Squared)		0.8263	
Dependent Variable		ROA	
Source: Annual reports of IFCI 2013-2017 published by moneycontrol.com with help of R 3.5.0			

Table 7 explains the impact of capital structure ratios on profitability with multi regression analysis. Table 7 explains the impact of Debt ratio, Proprietary Ratio and Debt Equity ratio on Return on Assets. For every one unit increase in Debt Ratio, Proprietary Ratio and Debt Equity ratio decreases ROA by -0.5142,-1.0142 and -0.1190 which are statistically insignificant at 5% level. The independent variables explain 82 % of the variations.

TABLE 8: MULTI REGRESSION ANALYSIS RESULT OF ROA WITH WORKING CAPITAL RATIOS

Variable	Co-efficient	t-value	P value
Intercept	0.05703	0.797	0.509
CR	-0.0009	-0.430	0.709
CATA	-0.0390	-0.574	0.624
Standard Error of Estimate	0.004899		
Co-efficient of Determination (R Squared)	0.1893		
Dependent Variable	ROA		
Source: Annual reports of IFCI 2013-2017 published by moneycontrol.com with help of R 3.5.0			

Table 8 explains the impact of working capital ratios on profitability with multi regression analysis. Table 8 explains the impact of Current Ratio and Current Ratio to Total Assets Ratio on Return on Assets. For every one unit increase in Current Ratio and Current Ratio to Total Assets Ratio ROA decreases by -0.0009 and -0.0390 which are statistically insignificant at 5% level as the independent variables explain only 18 % of the variations.

IX. Conclusion

There are number of factors which influence the capital structure and profitability of the firm.How ever to study the relationship between the two above said dependent variables a few independent variables are taken in the study few showing relative values and few showing absolute values in the form of ratios.IFCI Ltd has been facing the problem of low profits. Debt Ratio, Proprietary Ratio ,Debt Equity ratio has negative co-efficient .However, Current Ratio and Current Ratio to Total Assets ratio failed to explain the relationship as the r-squared value is significantly low .The second and the third hypothesis of the study are proven to be correct but the r-squared values in testing third hypothesis is very low.

References:

[1].   Shishir Pandey (2012)."Financial Structure and Profitability of IFCI Ltd: An Emphirical Analysis" Indian Journal of Finance, Volume 6, Issue 10, October 2012 ,pp 32-38.
[2].   Abor, J., (2005). "The Effect Of Capital Structure On Profitability: An Empirical Analysis Of Listed Firms In Ghana." Journal of Risk Finance, Vol. 6, Issue 5,   pp. 438 - 445.
[3].   Annual Reports of IFCI Ltd. from 2006-07 to 2010-11.
[4].   Ansari, Saghir Ahmed (1998). "Financial Intermediaries and Industrial Development." APH Publishing Corporation, New Delhi, p.1.
[5].   Cosh, A. and Hughes, A., (1994). "Size, Financial Structure and Profitability." in A. Hughes, and D.J. Storey, D.J, (eds) "Finance And The Small Firm.", London: Routledge, pp. 18 - 63.
[6].   Desai, Vasant, (1988). "Development Banking: Issues And Options." Himalaya Publishing House, Bombay, p. 39.
[7].   Gill, Amarjit, Biger, Nahum, Pai, Chenping, Bhutani, Smita (2009) . "The Determinants of Capital Structure In The Service Industry: Evidence from United States." The Open Business Journal, Volume 2, Issue 1, pp. 48-53, http://www.benthamscience.com/open/tobj/articles/V002/48TOBJ.pdf accessed on December 9, 2011.
[8].   Gupta, L.C., (1969). "The Changing Structure of Industrial Finance In India." Oxford University Press, Bombay, p. 85.
[9].   Harris, M. and Raviv, A. (1991). "The Theory of Capital Structure." Journal of Finance, Volume 46, Issue 1, pp.297-355.
[10].   Huang SG, Song FM, (2006). "The Determinants Of Capital Structure: Evidence From China." School of Economic, Finance Center for China." The University of Hong Kong Press for SSRN.

[11]. Lazaridis, I., Tryfonidis, D. (2006). "Relationship Between Working Capital Management And Profitability Of Companies Listed In The Athens Stock Exchange." Journal of Financial Management and Analysis, Volume 19, Number 1, pp. 26-35.

[12]. Rajan R.G., Zingales L., (1995). "What Do We Know About The Capital Structure? Some Evidence From International Data." Journal of Finance, Vol.50, Issue 5, pp. 1421- 1460.

[13]. Ross, G.C. (1977). "The Determinants of Financial Structure: The Incentive Signalling Approach." Bell Journal of Economics and Management Science, Volume 8, Issue 1, pp. 23-40.

[14]. www.moneycontrol.com accessed between June1 to June 6 2018.

[15]. Salehi, Mahdi and Kumars Biglar (2009). Study of the Relationship between Capital Structure Measures and Performance: Evidence from Iran", International Journal of Business and Management, vol.4 no (1), pp: 97-103.

[16]. Shubita, Dr. Mohammad Fawzi and Dr. Jaafer Maroof Alsawalhah (2012). The Relationship Between Capital Structure and Profitability, International Journal of Business and Social Science Vol. 3 No. 16 (Special Issue), pp: 104-112.

[17]. Stulz, R. (1990). Managerial discretion and optimal financing policies, Journal of Financial Economics, Vol. 26, pp: 145-158.

[18]. Ting, Irene Wei Kiong and Hooi Hooi Lean (2011). Capital Structure of Government-Linked Companies in Malaysia, Asian Academy of Management Journal of Accounting and Finance, Vol. 7, No. 2, pp:137–156.

[19]. Titman, S., Wessels, R. (1988). The determinants of capital structure choice. Journal of Finance, Vol. 43, pp:1-19.

[20]. Zeitun, R., and G. Tian (2007). Capital Structure and Corporate performance: evidence from Jordan, Australasian Accounting Business and Finance Journal, Vol.1, pp: 40-53