ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 12| December 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

IMPACT OF CAPITAL STRUCTURE ON PROFITABILITY: EVIDENCE FROM THE INDIAN INSURANCE SECTOR- WITH SPECIAL REFERENCE HDFC LIFE INSURANCE

Ms. A Vaishavi[1], Dr. R S Ch Murthy Chodisetty[2]
[1]*MBA Student (24881E0003), Department of Management studies,*
Vardhaman College of Engineering, Shamshabad, Hyderabad. Telangana
[2]*Associate Professor, Department of Management studies,*
Vardhaman College of Engineering, Shamshabad, Hyderabad. Telangana
0000-0001-6222-0373

Article DOI: https://doi.org/10.36713/epra25463
DOI No: 10.36713/epra25463

ABSTRACT

The study provides valuable insights for insurance company management in formulating optimal capital structure strategies and assists investors in evaluating financial performance. It also contributes to existing literature by offering empirical evidence from the Indian insurance sector and highlights the need for maintaining financial stability while maximizing profitability. The research is based on ***secondary data*** *collected from the annual reports of HDFC Life Insurance, IRDAI publications, and financial databases over a selected study period.* ***Ratio analysis, correlation analysis, and multiple regression techniques*** *are employed to assess the effect of capital structure on profitability. The findings indicate that capital structure has a* ***significant influence on profitability****, with an optimal mix of equity and debt contributing positively to financial performance. Excessive leverage, however, is found to adversely affect profitability due to higher financial risk and regulatory constraints in the insurance industry. Capital structure is a crucial financial decision that significantly influences a firm's profitability and long-term sustainability, particularly in the highly regulated insurance sector. The present study examines the* ***impact of capital structure on the profitability of Indian insurance companies****, with special reference to* ***HDFC Life Insurance Company Ltd.*** *The study aims to analyze the relationship between capital structure variables—such as debt–equity ratio, solvency ratio, and leverage—and profitability indicators including return on assets (ROA), return on equity (ROE), and net profit margin.*

KEY WORDS

- *Capital Structure*
- *Profitability*
- *Debt–Equity Ratio*
- *Financial Leverage*
- *Solvency Ratio*
- *Return on Assets (ROA)*

JEL Codes

- ***G20*** *– Financial Institutions and Services*
- ***G21*** *– Banks; Depository Institutions; Micro Finance Institutions*
- ***G22*** *– Insurance; Insurance Companies; Actuarial Studies*
- ***G32*** *– Financing Policy; Capital and Ownership Structure*
- ***G34*** *– Mergers; Acquisitions; Restructuring; Corporate Governance*

1. INTRODUCTION

Capital structure is an important issue in setting rates charged to customers by regulated utilities in the United States. The utility company has the right to choose any capital structure it deems appropriate, but regulators determine an appropriate capital structure and cost of capital for ratemaking purposes. Various leverage or gearing ratios are closely watched by financial analysts to assess the amount of debt in a company's capital structure.

The Miller and Modigliani theorem argues that the market value of a firm is unaffected by a change in its capital structure. This school of thought is generally viewed as a purely theoretical result, since it assumes a perfect market and disregards factors such as fluctuations and uncertain situations that may arise in financing a firm. In academia, much attention has been given to debating and relaxing the assumptions made by Miller and Modigliani to explain why a firm's capital structure is relevant to its value in the real world.

Some of the important definitions are presented below:

According to Gere Stenberg, 'capital structure of a company refers to the composition or make up of its capitalization and it includes all long term capital resources viz., loans, reserves, shares and bonds'. Keown et al. defined capital structure as,

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 12| December 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

'balancing the array of funds sources in a proper manner, i.e. in relative magnitude or in proportions'.

In the words of P. Chandra, 'capital structure is essentially concerned with how the firm decides to divide its cash flows into two broad components, a fixed component that is earmarked to meet the obligations toward debt capital and a residual component that belongs to equity shareholders'.

Importance of Capital Structure

Value Maximization

Capital structure maximizes the market value of a firm, i.e. in a firm having a properly designed capital structure the aggregate value of the claims and ownership interests of the shareholders are maximized.

Cost Minimization

Capital structure minimizes the firm's cost of capital or cost of financing. By determining a proper mix of fund sources, a firm can keep the overall cost of capital to the lowest.

Increase in Share Price

Capital structure maximizes the company's market price of share by increas-ing earnings per share of the ordinary shareholders. It also increases dividend receipt of the shareholders.

Investment Opportunity

Capital structure increases the ability of the company to find new wealth- creating investment opportunities. With proper capital gearing it also increases the confidence of sup-pliers of debt.

2. REVIEW OF LITERATURE

- **N. Narsaiah (2020):** The article titled "Does Capital Structure Impact on Financial Performance: Evidence from India" examined the impact of capital structure on financial performances of listed on BSE. The researcher has selected 100 Indian manufacturing companies over the period 2014 – 2019. In order to attain the objectives, he used regression techniques. Finally, the researcher found that long term debts and total debts decreased the financial performance.
- **Purnima Rao, Satish Kumar and Vinodh Madhavan (2019):** The article titled "A Study on Factors Driving the Capital Structure Decisions of Small and Medium Enterprises (SMEs) in India" examined the factors affecting the capital structure decisions of small and medium enterprises in India. The researchers have selected 174 non-financial firms. In order to attain the objective, they used Generalized method of moments. They found that the applicability of pecking order theory of SMEs in India.
- **Shailaja (2019):** The article titled "Optimization of Capital Structure for Increased Profitability" was examined to know the factors which are influencing capital structure. The researcher collected data for 6 years i.e, 2012-2018. The data is collected from 100 IT firms across India. To analyze the data, she used statistical tools namely coefficient of variation, mean, standard deviation and ratios. The researcher found that IT companies with low capital and low operating expenses are highly profitable despite of their debt capital ratio capital structure.
- **Shalini. R and Mahua Biswas (2019):** The article titled "Capital Structure Determinants of S&P BSE 500: A panel Data Research". The researcher selected 416 companies belonging to 14 industrial sectors listed in S&P BSE for a duration of 19 years which is from 2000 to 2018. To achieve the objective of the research she used multiple regression model to understand the influence of selected variables on capital structure. The researchers finds that 4 explanatory variables like size, tax paid, depreciation to total assets ratio and profitability ratio are statistically significant capital structure.
- **S. Hema Prasanna (2018):**The article titled "Determinants of Capital of Indian Pharmaceutical Industry" examined to identify the capital structure of the selected companies in the Indian Pharmaceutical industry. The researcher has selected 10 companies of Indian Pharmaceutical industry. In order to attain the objectives, she used correlation, regression and step wise regression. Finally, the researcher found that among the sixteen variables, two variables namely solvency ratio and liquidity are the prominent variables which determine the capital structure of Indian Pharmaceutical Industry.
- **Chandrika Prasad Das, RabindraKumarSwain (2018):** The article titled "Influence of Capital Structure on Financial Performance" examined the determinants of capital structure and its impacts on financial performance. They used secondary data and taken from 50 top companies for the study. In order to attain the objectives the researchers used regression model. Finally, the researcher found that there is a significant relationship between capital structure and profitability and capital structure has significant impact on financial performance of sample companies.
- **Atif Ghayas and Javaid Akhter(2018):** The article titled "Impact of Capital Structure on Profitability :An Empirical Analysis of Listed Firms in India "examined the impact of capital structure decision on the firm's profitability. The reasearchers selected 35 Indian pharmaceutical companies listed on Bombay Stock Exchange (BSE) during the period of 5 years from 2012 to 2016. In order to attain the objective, they used regression analysis. Finally they found that there is a positive effect of SDA and DA on ROE, while a weak-to-no effect was found of LDA on ROE.
- **Rosy Dhingra, Dr. Madhuri Gupta, Dr. Kapil Dev (2018):** The article titled "An empirical study- Capital Structure of Indian IT Sector" examined to analyse the extent of which selected financial variables affect the capital structure of IT companies listed with BSE. The researchers are selected a sample of 20 IT sector companies for the period of 10 years from April 1st 2008 to March 31st 2017. In order to attain the objective they used pooled OLS (ordinary least squares) Model. Finally they found that financial variables play a vital role in determining capital structure, especially variables like long term profitability and tangibility.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 12| December 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

- **Rosy Dhingara and Kapil Dev(2016):** The article titled "Determinants of Capital Structure – A Study of Oil Industry in India" examined the determinants and the effects of accounting variables on capital structure of oil companies listed on NSE. The researchers selected 10 oil companies listed on NSE. In order to attain the objective they used panel regression. Finally they found that accounting variable like financial strength is positively related to leverage and other variables are negatively related.
- **Dr. Mohd Taqi, Dr. MohdAjmal and Dr. Asif Pervez (2016):** The article titled "Impact of Capital Structure on Profitability of Selected Trading Companies of India" examined to understand the relationship between capital structure and financial performance of the company. The researchers selected eight trading companies listed in the BSE. In order to attain the objectives the researcher used multiple regression analysis method for analysing and testing of hypothesis. Finally, they found that capital structure influences financial performance of firm.

3. STATEMENT OF THE PROBLEM

Capital structure of the firm. Financial managers find it tough to exactly determine the optimal capital structure. A firm has to issue various securities in a countless mixture combination so that it can maximize its overall value and gives its optimal capital structure. If a wrong mix of finance is employed then the performance and survival of the business enterprise may be seriously affected. Survival and growth needs resources but financing of these resources has its own limitations. Therefore, the present study is an attempt undertaken to know the impact of capital structure on financial performance of selected trading companies in India. It is always quite problematic to design specific and optimal capital structure for the firms that can maximize the firm's performance, profitability and shareholders' wealth regardless of their size and other factors. Due to the risk associated with violating agency cost theory and capital structure decisions, we have to select the best possible capital structure. The optimal capital structure in different economies has different ratios that contribute in the problem of analyzing and measuring their impact on firm's performance, Profitability and Shareholders' wealth.

4. RESEARCH GAP

The previous studies particularly on large firms have focused on the relationship between corporate size, fixed assets and financial leverage. Little has been studied on how and to what extent these variables (debt financing) make an influence on the financial performance of firms using data from the firm level. This study will seek to establish the effect of capital structure on the financial performance of Indian Trading sector firms listed on the Bombay Stock Exchange (BSE).

5. OBJECTIVES OF THE STUDY

- ❖ To Study the Role of Capital Structure in India.
- ❖ To Study the Capital Structure of HDFC Life Insurance.
- ❖ To examine the nature of relationship between Capital Structure and Profitability of HDFC Life Insurance.
- ❖ To Study the impact of debt equity ratio on profitability of HDFC Life Insurance.

6.HYPOTHESES OF THE STUDY

H0: There is no relationship between Capital Structure and Profitability of HDFC Life Insurance

H1: There is a relationship between Capital Structure and Profitability of HDFC Life Insurance

H0: There is no Significant Impact of Dept-Equity ratio on Profitability of HDFC Life Insurance

H1: There is a Significant Impact of Dept-Equity ratio on Profitability of HDFC Life Insurance

7. RESEARCH METHODOLOGY

- ❖ **Sources of Data:** The secondary data were obtained from the annual reports of the ten public sector banks. Additional data for analysis and verification were sourced from ww.moneycontrol.com. The data were subjected to certain fundamental mathematical operations such as computing the ratios, before being used for the analysis.
- ❖ **Research tools**
  - Correlation
  - Regression
  - Descriptive Statistics
  - Stationary test
  - Regression Analysis
  - OLS (Ordinary Least Square) Method

8. SCOPE OF THE STUDY

The present study is primarily concerned with the issue of capital structure and financial Performance of eight selected companies of Indian trading sector listed on Bombay Stock Exchange, there are 6 trading companies used in the study. The tenure of the study is for 5 years from 2016-17 to 2020-2021.

9. NEED FOR THE STUDY

It is difficult to determine the capital structure of the firm. Financial managers find it tough to exactly determine the optimal capital structure. A firm has to issue various securities in a countless mixture combination so that it can maximize its overall value and gives its optimal capital structure. Therefore, the present study is an attempt undertaken to know the impact of capital structure on financial performance of selected trading companies in India.

10. RESULT AND DISCUSSION

1. To examine the nature of relationship between Capital Structure and Profitability of LIC of India.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 12| December 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

Table Shown Correlations of HDFC Life Insurance from2016-17 to 2020-2021.

Year	Capital(x)	Dx	Dx2	Net profit(y)	Dy	Dy2	Dx*dy
2020-2021	2021	23	529	1360	468	219024	10764
2021-2022	2019	21	441	1295	403	162409	8463
2022-2023	2017	19	361	1277	385	148225	7315
2023-2024	2012	14	196	1109	217	47089	3038
2024-2025	1998	0	0	892	0	0	0
	10067	**77**	**1527**	**5933**	**1473**	**576747**	**29580**

$$r = \frac{n(\Sigma xy) - (\Sigma x)(\Sigma y)}{\sqrt{[n\Sigma x^2 - (\Sigma x)^2][n\Sigma y^2 - (\Sigma y)^2]}}$$

Correlation (r) = 0.996387701

Table Shown Regression of HDFC Life Insurance from2016-17 to 2020-2021.

Year	Capital(x)	Net profit(y)	X2	Y2	Xy
2020-21	2021	1360	4084441	1849600	2748560
2019-20	2019	1295	4076361	1677025	2614605
2018-19	2017	1277	4068289	1630729	2575709
2017-18	2012	1109	4048144	1229881	2231308
2016-17	1998	892	3992004	795664	1782216
	10067	**5933**	**20269239**	**7182899**	**11952398**

$$A = \frac{(\Sigma y)(\Sigma x^2) - (\Sigma x)(\Sigma xy)}{n(\Sigma x^2) - (\Sigma x)^2}$$

$$B = \frac{n(\Sigma xy) - (\Sigma x)(\Sigma y)}{n(\Sigma x^2) - (\Sigma x)^2}$$

Regression Values a=-39505.08734, b=20.21043376

Result & Discussion

Above Tables shows that Capital Structure Rations and Profitability Ratios are explain about values and also shown Impact on Capital Structure on Profitability position of HDFC Life Insurance is good. The Correlation and |Regression shows that positive correlationship between Capital on Profitability of LIC of India.

Descriptive Statistics of HDFC Life Insurance from 2016-17 to 2020-2021

	2020-21	2019-20	2018-19	2017-18	2016-17
Mean	1690.5	1657	1647	1560.5	1445
Standard Error	330.5	362	370	451.5	553
Median	1690.5	1657	1647	1560.5	1445
Mode	#N/A	#N/A	#N/A	#N/A	#N/A
Standard Deviation	467.3975824	511.9453096	523.2590181	638.5174234	782.0601
Sample Variance	218460.5	262088	273800	407704.5	611618
Kurtosis	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Skewness	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Range	661	724	740	903	1106
Minimum	1360	1295	1277	1109	892
Maximum	2021	2019	2017	2012	1998
Sum	3381	3314	3294	3121	2890
Count	2	2	2	2	2

Result & Discussion

Above Tables shows that Capital Structure Rations and Profitability Ratios are explain about values and also shown Impact on Capital Structure on Profitability position of LIC of India is good. Descriptive Statistics and Regression Statistics shows that Postive impact on Capital structure on Profitability.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 12| December 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

Capital structure refers to the firm's financial framework which consists of the debt and equity used to finance the firm. Capital structure in financial term means the way by which a firm finances their assets through the combination of equity, debt or hybrid securities (San & Heng,2011). Capital Structure of a firm is the composition of different securities issued by the firm to finance its operations

Profitability and Capital Structure Ratios HDFC Life Insurance from 2016-17 to 2020-2021

Year	Net profit	Net sales	Net profit ratio
2020-2021	1360	71447	1.903508895
2021-2022	1295	29351	4.41211543
2022-2023	1277	38360	3.32898853
2023-2024	1109	32246	3.439186256
2024-2025	892	30642	2.911037139

Net Profit Ratio = Net Profit/Net Sales*100

Year	Operating profit	Net sales	Operating profit ratio
2020-2021	1237	71447	1.731353311
2021-2022	1140	29351	3.884024394
2022-2023	843	38360	2.197601668
2023-2024	1076	32246	3.336847981
2024-2025	977	30642	3.188434175

Operating Profit Ratio = Operating Profit/Net Sales*100

Year	Operating expenses	Net sales	Operating ratio
2020-2021	70211	71447	98.27004633
2021-2022	28211	29351	96.11597561
2022-2023	37517	38360	97.80239833
2023-2024	31170	32246	96.66315202
2024-2025	29665	30642	96.81156582

Operating Ratio = Operating Expenses/Net Sales*100

Year	Net profit	Total assets	Return on assets
2020-2021	1360	179582	0.757314207
2021-2022	1295	132162	0.979858053
2022-2023	1277	130005	0.982269913
2023-2024	1109	10481	10.58105143
2024-2025	892	95106	0.937900869

Return on Assets = Net Profit/Total Assets*100

Year	Net profit	Share holders equity	Return on equity
2020-21	1360	2021	67.2934191
2019-20	1295	2019	64.14066369
2018-19	1277	2017	63.31184928
2017-18	1109	2012	55.11928429
2016-17	892	1998	44.64464464

Return on Equity = Net Profit/Shareholders Equity*100

Year	Total liabilities	Share holders equity	Debt to equity ratio
2020-2021	170346	2021	8428.797625
2021-2022	125368	2019	6209.410599
2022-2023	124350	2017	6165.096678
2023-2024	105763	2012	5256.610338
2024-2025	91267	1998	4567.917918

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 12| December 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

Debt to Equity Ratio = Total Liabilities/Shareholders Equity *100

Year	Total liabilities	Fixed assets	Debt to fixed assets ratio
2020-2021	170346	327	52093.57798
2021-2022	125368	322	38934.16149
2022-2023	124350	323	38498.45201
2023-2024	105763	336	31477.08333
2024-2025	91267	337	27082.19585

Debt to Fixed Assets Ratio = Total Liabilities/Fixed Assets*100

Year	Total liabilities	Current assets	Debt to current assets ratio
2020-2021	170346	5402	3153.387634
2021-2022	125368	4606	2721.841077
2022-2023	124350	4700	2645.744681
2023-2024	105763	3537	2990.189426
2024-2025	91267	3016	3026.094164

Debt to Current Assets Ratio = Total Liabilities/Current Assets*100

Year	Roce
2020-2021	20%
2021-2022	23%
2022-2023	25%
2023-2024	31%
2024-2025	31%

ROCE = EBIT/Capital Employed

Result & Discussion

According to my analysis shows that 9 ratios out of which 6 are profitability ratios like Net profit ratio, Operating profit ratio, Operating ratio, Return on assets ratio , Return on equity ratio and Return on capital employed(ROCE) and remaining 3 are Debt to equity ratio, Debt to fixed assets ratio, Debt to current assets ratio were used for 5years from 2016-17 to 2020-2021 for the purpose of profitability, capital structure and other inventories

11. CONCLUSION OFTHE STUDY

The research based on LIC of India. The data is collected for 5 years for each company since 2016-17 to 2020-21. I used various statistical tools like correlation, regression, regression statistics, descriptive statistics and ratio analysis for all the companies. I calculated 9 ratios out of which 6 are profitability ratios and remaining 3 are capital structure ratios. The correlation and regression statistics said that the relationship between profitability and capital structure is positively and negatively identified. In descriptive statistics said that whether mean, median, skewness , kurtosis and standard deviation values are positively affected to insurance companies in India. I conducted ANOVA to determine whether the relationship exits between the companies. Finally, profitability ratios shows that in future profitability position of the companies are good.

12. REFERENCES

1. *N. Narsaiah(2020), "Capital structure impact on financial performance: Evidence from India", Academy of Accounting and Financial Studies Journal.*
2. *Purnima Rao, Satish Kumar and Vinodh Madhavan(2019),"A Study on factors driving the capital structure decisions of small and medium enterprises (SMEs) in India", IIMB Management Review.*
3. *P.Shailaja(2019), "Optimization of capital structure for increased profitability", International Journal of Engineering and Advanced Technology (IJEAT).*
4. *Shalini R, Mahua Biswas(2019)"Capital structure determinants of S&P BSE 500: A panel data research", International Journal of Recent Technology and Engineering (IJRTE).*
5. *S.Hemaprasanna(2018), "Determinants of capital structure of Indian pharmaceutical industry", World Wide Journal of Multidisciplinary Research and Development.*
6. *Chandrika Prasad Das and Rabindra Kumar Swain (2018),"Influrance of capital structure on financial performance", KIIT Journal of Management.*
7. *AtifGhayas and Javaid Akhter(2018),"Impact of Capital Structure on profitability: An empirical analysis of listed firms in India", Asian Journal of Managerial Science.*
8. *Rosy Dhingra, Dr. Madhuri Gupta, Dr. Kapil Dev(2018), "An empirical study-Capital structure of Indian IT sector", International Journal of Research and Analytical Reviews.*
9. *Rosy Dhingra and Kapil Dev(2016), "Determinants of capital structure-A study of oil industry in India", International Journal of Engineering and Management Research.*

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 12| December 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

10. *Dr. MohdTaqi, Dr. MohdAjmal and Dr.Asif Pervez(2016),"Impact of capital structure on profitability of selected Indian Trading companies of India", Arabian Journal of Business and Management Review.*
11. *Sandip Sinha, Pradip Kr. Samanta(2014),"Determinants of capital structure of selected Indian Cement companies-A quantile regression approach",Vidya Sagar University Journal of Commerce.*
12. *AnshuHandoo and KapilSharma(2014), "A study on determinants of capital structure in India", IIMB Management Review.*
13. *Dr.Rohit R.Manjule(2014), "Impact of Capital Structure of Indian industries", International Journal of Scientific and Engineering Research.*
14. *A.M.Goyal(2013), "Impact of capital Structure on performance of listed public sector banks in India", International Journal of Business and Management Invention.*
15. *Dr.G.S. Popli and Mr. Gajendra Kumar Jaiswal (2012),"Determinants of corporate capital structure of Indian industries', Delhi School of Professional Studies and Research.*
16. *Prof.Dr.Sandeep Goel(2011),"Capital Structure Analysis In Indian heavy industry the pecking order dimension", International Journal of Human Resource Management and Research.*
17. *Ashok Panigrahi(2010), "Capital Structure of Indian Corporate: Changing Trends", Asian Journal of Management Research.*
18. *Basudeb Guha-Khasnobis & Saumitra N. Bhaduri (2002), "Determinants of capital Structure in India (1990-1997):A Dynamic panel Data Approach", Journal of Economic Integration.*
19. *SumitraDas and Malabika Roy "Inter-Industry differences in capital structure: The evidence from India"*
20. *Dhananjaya K and Krishna Raj "Market Value and Capital Structure: A study of Indian manufacturing firms" The Institute of Social and Economic Change, Bangalore.*