Library Progress International *Print version ISSN 0970 1052*
Vol.44 No. 3, Jul-Dec 2024: P.10525-10535 *Online version ISSN 2320 317X*

Original Article *Available online at www.bpasjournals.com*

Post-COVID influence on Debt structure of Indian Non-Banking Financial Corporation

[1]Dr. Mamta Dhanda, [2]Dr. Bhawna Choudhary, [3]Dr. Sunaina Dhanda and [4]Dr. Nitesh Rawat

[1,2]IILM Institute for Higher Education, IILM University Delhi, India
[3]CRM Jaat College, Guru Jambheshwar University of Science and Technology, Hisar, Haryana, India
[4]SGT University Gurugram, India

How to cite this article: Mamta Dhanda, Bhawna Choudhary, Sunaina Dhanda, Nitesh Rawat (2024). Post-COVID influence on Debt structure of Indian Non-Banking Financial Corporation. *Library Progress International,* 44(3), 10525-10535.

ABSTRACT
This research examines the impact of COVID-19 on debt levels in the Indian Non-Bank Financial Companies (NBFCs) sector, focusing on around 11,000 corporations from the CMIE Prowess database. The study uses panel data methodology, interaction analysis, and two-stage least squares method to identify the influence of COVID-19 on leverage ratios from 2017-2022. The findings show that the outbreak of COVID-19 increased the level of debt in the NBFCS sector, with small NBFCs having higher debt levels post-Covid-19 compared to large NBFCs. Additionally, NBFC debt levels are comparatively higher than those of Indian corporations, more than double. The study's limitations include its focus on Indian NBFCs, which can only be generalized to India, but can also be studied in emerging economies. The findings can provide insight into the capital structure status of organizations and the cost bearing on corporations, helping Indian policymakers optimize the capital structure in the NBFC sector. The study also highlights the characteristics of NBFCs that predict debt levels, a novelty that was not previously considered in prior research.

Keywords: Capital structure, leverage, debt, India, non-banking financial corporations.

1. INTRODUCTION

Non-banking financial corporations (NBFCs) are an integral part of an economy. They contribute significantly to the financial system of an economy, thus providing a foundation for its development. The way banks mobilize funds among the surplus and deficit units, NBFCs play a concrete role by offering services that are not generally accessible with full-fledged banks. NBFCs offer a wide range of goods and services, including investment and merchant banking, portfolio management, underwriting, consultancy and advertising, issue management, underwriting, bridge financing, investment counseling, corporate agents in mergers and acquisitions, selling financial data, as well as small loans to entrepreneurs as start-up capital (Vittas, 1997; Shrestha, 2007; Sufian, 2008). Whereas, playing the role of intermediaries, NBFCs collect funds from varied sources and lend to those deficit sectors. The major difference between them and banks is that they do not accept demand deposits and do not operate a current account. NBFCs basically provide funds at considerably lower rates. NBFCs augment the banks by taking up the function of an intermediary in credit distribution (Islam and Osman, 2011). As compared to banks, NBFCs provide customary services to their clients on a demand basis. This is the reason that even though the financial sector is ruled by banks, the contribution of NBFCs is no less towards an economy. All in all, they are the second-most important financial institution for an economy after banks. Their significance lies in acting as a financial safety net for businesses, granting them easier credit access in situations where conventional banking channels could be limiting or less advantageous. By doing so, NBFCs effectively bridge the gap in funding, catering to the unique requirements of start-ups and those involved in public issues who might encounter difficulties securing loans through traditional banking routes. This pivotal role not only ensures enhanced capital flow for these entities but also cultivates a more inclusive and flexible financial landscape that empowers a diverse range of business endeavors to prosper and contribute to economic growth. Thus, the efficiency of NBFCs may have a considerable effect on the economy as a whole. However, given the way IL&FS ravaged the Indian NBFC sector with a debt default of around one lakh crore, the study of debt in the capital structure of NBFCs is indispensable. Maintenance of the capital structure is a must for an organization, whether it's a corporate or financial institution. Although there are varied views on the determination of capital structure, the study of debt

is very critical, specifically in an emerging market like India. Debt, which is recognized as the cheapest form of funding an organization can have, considerably decreases its liquidity, making its survival difficult. After the development of theories about optimum capital structure by Modigliani and Miller (1958, 1963), widespread research has been undertaken to recognize the behavior of an organization and its debt. The studies show that the capital structure of companies is impacted in varied ways by internal factors, established situations, and macroeconomic factors (Demirguç-Kunt and Maksimovic, 1999; Kenc and Dibooglu, 2010; Atici and Gursoy, 2011; Graham *et al.*, 2015; Demirguç-Kunt *et al.*, 2020). However, there is widespread research on the capital structure of NBFCs in developed markets (Rajan and Zingales, 1995; de Jong *et al.*, 2008), but in the framework of evolving countries, it is still nascent. The debt levels of NBFCs in emerging economies vary considerably compared to those in developed countries, and their findings cannot be generalized because the approach along with the practices and dynamics are distinctive. The impact of the legislative framework, processes, and corporate governance standards cannot be discounted. (Bhaduri, 2002) on the NBFCs of an economy. Over the current decade, several companies have pursued differing strategies with respect to leveraging their firms. Some companies have embraced stock buybacks as a means to increase leverage, while others have chosen to minimize debt and rely more heavily on equity. Unfortunately, this varying capital structure approach has led to substantial problems in identifying sufficient liquidity and securing long-term debt. As a result, many companies have experienced periods where their capital structure proved to be misaligned with their operational needs and financial goals. Hence, this study analyzes the debt levels of NBFCs in the Indian context. Lately, the pandemic situation has raised many concerns about uncertainty and decision-making. The influence of the pandemic was enormous. There were no major savings or huge expenditures. In the Indian scenario specifically, the three-month lockdown of all economic activities from March 2020 to June 2020 itself had a large cost involved. This study, by focusing on the debt levels, tries to look into the financial strength of NBFCs in India. The research adds to the current body of knowledge of NBFCs, as the debt and capital structure of corporations are significantly focused, but in the context of NBFCs, it is still nascent. Thus, this study, by focusing on the whole sector of NBFCs contributed by around 11,000 corporations, previews the status of Indian non-banking financial corporations. By delving into the role of NBFCs in capital structure decisions, the research seeks to shed light on their significance as a potential source of financial strength for companies. The paper will analyze the influence of COVID on the debt ratio, discerning their influence on a company's financial stability, growth prospects, and risk management. Furthermore, the study will examine the effectiveness of NBFCs in ensuring access to long-term and short-term debt, considering the dynamic and often unpredictable nature of the financial market. By scrutinizing the interactions between NBFCs, long-term debt, and short-term debt in the context of capital structure, the research paper endeavors to provide valuable insights for policymakers, investors, and corporate leaders. Understanding the role and impact of NBFCs in shaping the capital structure selections of companies will contribute to a more comprehensive understanding of the financial ecosystem and its interconnectedness. Through this analysis, the paper aims to contribute to the current knowledge on capital structure decisions, especially in relation to NBFCs, in order to facilitate informed decision-making and promote financial stability and growth in the market. The study of pandemic influence also sheds light on the variation in debt levels in the context of size. The remaining portions of the paper are divided into those that deal with the literature review, research methodology, findings, discussion, and conclusion.

2. THEORETICAL FRAMEWORK:

The renowned theory of Modigliani and Miller (MM) (1958) set the stage for the identification of factors impacting the debt structure of an organization. However, basically, there are two major approaches known as trade-off theory and pecking order theory that explain the optimal capital structure. The trade-off theory discusses that cost and benefit suggest the optimal level of debt in the structure (Kraus and Litzenberger, 1973; Copeland and Weston, 1983; Jensen and Meckling, 1976). It recognizes that, apart from the financial costs, the conflict between shareholders and managers working as their agents also has costs for the organization. It can be resolved by issuing shares to the managers, who basically work as agents for the shareholders, or by inducing the presence of debt (Jensen, 1986). On the other hand, discussing information asymmetries, pecking order theory explains the debt in capital structure as a source of signaling to the stakeholders (Leland and Pyle, 1977; Myers and Majluf, 1984). It states that debt is used in the structure as per the requirement of optimizing the cost arising out of information asymmetries. It can be used as a disciplinary tool for managers so as to reduce information asymmetry. The managers, being agents to the stakeholders, are reluctant to publicize any adverse information regarding debt default (Harris and Raviv, 1990; Diamond, 1989; Hirschleifer and Thakor, 1989). Though varied views are presented in the context of capital structure, it is difficult to build a conclusive and relevant idea in any particular context (Graham, 2000; Leary and Roberts, 2010).

3. RATIONALE OF THE STUDY:

The presence of financial institutions is very important in the present economic atmosphere. In a similar vein, the presence of NBFCs is on par with that of any banking organization. Like any other financial institution, the status of NBFCs is also an indication of an economy’s financial strength as a whole (Sufian, 2008). NBFCs hold great

value as an organization in the context of economic progress and financial sustainability (Rahman *et al.*, 2023). They perform financial functions that are not on the periphery of the banks, thus stimulating investment and savings efficiency. On the other hand, by sharing the field with banking organizations, NBFCs are more open to a huge amount of lending and sponsoring as venture capitalists, thus providing a cushion to the banking sector. However, when events like the IL&FS scam happen and the amount of funds involved is observed, it becomes very difficult to avoid the idea of studying the Indian debt structure. Apart from that, the breakout of the pandemic also has major implications. As in India, the financial sector is regulated very closely by organizations like the Reserve Bank of India (RBI) and the Securities Exchange and Board of India; any default itself questions the implication of the regulations. As these NBFCs have the funds of the general public in the form of mutual funds and insurance policies, their sustainability is as important as that of any other financial organization. Thus, this study delves into the whole NBFC sector by covering more than 10,000 organizations in India to study the debt structure and their reliability and trustworthiness.

4. LITERATURE REVIEW:

Though a varied version of literature is available for non-banking financial corporations, the studies are negligible in the context of debt structure and leverage. As the level at which an organization operates is a major determinant (Harris and Raviv, 1991; Titman and Wessels, 1988; Hall *et al.*, 2000; Esperança and Matias, 2005), debt presents a favourable influence on an organization. As discussed by Warner (1977), the firm size of organizations basically reduces the transactional cost. Not only this, but higher levels of transactional costs obstruct small organizations from going into debt. Further, from the perspective of insolvency, there is a lower chance of liquidation on the part of large organizations because they are comparatively more diversified than small organizations. (Ang *et al.*, 1982; Pettit and Singer, 1985; Prakash *et al.*, 2022). Apart from this, the presence of debt also increases transparency, thus increasing creditworthiness and further reducing the debt rate. (Diamond, 1989; Rajan and Zingales, 1995). In the present study, it is studied in the context of the breakout of the pandemic in the pre-Covid-19 and post-Covid-19 eras. The credibility of an organization can be predicted by its profitability. As discussed in Myers (1984), while focusing on the pecking order theory, internal funds are the only substitute for debt in the capital structure. Thus, it may be concluded that, if provided with the choice, companies prefer debt over equity because of the lower cost. It also avoids any ownership dilution. However, if observed on the basis of trade-off theory, Fama and French (2002) suggest a direct relationship between debt and profitability. A profitable corporation has better figures to prove its capabilities. Not only this, but in order to have some tax benefits over its earned profit, they will definitely prefer debt over equity (Rajan and Zingales, 1995; Frank and Goyal, 2003; Debnath, 2015). Age depicts the experience an organization has had. Prior research indicates that old companies gain maturity with experience and have an edge as compared to young corporations. It is not the case only in the context of the presence of debt but in all the perspectives from which an organization operates. (Ajit *et al.*, 2013; Maheshwari and Agrawal, 2015; Bassiouny, 2016; Das and Jena, 2016; Dhamija and Arora, 2017; and Mangala and Dhanda, 2023). The mature corporations have stability of income, and they are more aware of the loops of the existing system with their experiences (Ritter, 1991; Firth, 1997; Certo *et al.*, 2001b; Lukose and Rao, 2003; Georgen *et al.*, 2007; Sahoo and Rajib, 2010; Ahmad-Zaluki *et al.*, 2011; Bhatia and Singh, 2012; Handa and Singh, 2017; Shukla and Shaw, 2018). The efficiency of operations predicted on the basis of return on assets symbolizes the growth perspective of an organization. The existing studies reflect indifference in this context. (Abu Mouamer, 2011). Growth requires funds, and it may lead to the presence of debt in the structure (Ross, 1977; Jensen, 1986; Stulz, 1990). Another view that persists in the literature is that internal funds are used to finance growth instead of debt (Hovakimian *et al.*, 2001). The growth ensures an increment in the agency cost of debt, which itself will lower the preference for debt (Myers, 1977; Myers and Majluf, 1984; Rajan and Zingales, 1995). Not only this, the companies are found to prefer financial flexibility by using equity as compared to debt (Harris and Raviv, 1991). The existence of higher risk levels in high-growth corporations leads to an increase in the cost of bearing debt, thus reducing its worth. Not only this, but in the context of NBFCs, the growth as depicted by return on assets has no specific illustrations, thus making it a raw concept for the study. Debt service, as evaluated on the basis of the interest coverage ratio, is one of the major factors associated with debt payments, though it is avoided considerably in research studies. CMIE Prowess states that "the interest coverage ratio is an indicator that serves as a measure of the adequacy of a company's profits to meet its interest payments. In other words, it measures the comfort with which a company can service its debt." The higher the interest coverage, the less burdensome a company is likely to find it to service its debt. Interest cover indicates a safety margin that a company has in terms of being able to meet its interest obligations. The higher the interest cover ratio, the better an organization's ability to meet obligations related to business from its earnings. It also shows the scope of borrowings by depicting organizations capabilities to afford debt in terms of cost. Similar to the debt-equity ratio, liquidity as evaluated by current assets to current liabilities depicts the relationship of debt on the basis of agency theory (Ozkan, 2001). Organizations with strong liquidity have efficient management of operations, thus reducing the chances of liquidation and bankruptcy costs. Bankruptcy induces agency costs, thereby decreasing financing via debt (Myers and Rajan, 1998). It is used as an instrumental variable in the current study to control for endogeneity. In the Indian context, Debnath (2015) focused on the firm characteristics of the NBFCs listed on the

BSE 500 only. The study concludes that liquidity, tangibility, and distinctiveness have a positive relationship, whereas profitability, the absence of non-debt tax shields, and company size have an inverse relationship with the level of debt in India. In another study, Handoo and Sharma (2014) evaluated 870 listed Indian corporations further segregated on the basis of ownership from 2001 to 2010. The work identified the significant influence of profitability, growth, asset tangibility, size, cost of debt, tax rate, and debt serving capacity leverage structure. Chavali and Rosario (2018) investigated the associations between NBFCs' net profit, return on capital employed, return on equity, and return on assets, interest coverage ratio, and their capital structure. Chakarbarti and Chakarbarti (2019), specifically taking the energy sector into concern, find firms' age, asset turnover ratio, liquidity, and firms' size as the significant determinants of capital structure for Indian energy companies, as compared to profitability, debt service capacity, sales growth, non-debt tax shield, and tangibility ratio, which are found to be insignificant. Chauhan *et al.* (2020) concluded that the presence of debt in NBFC-MFIs has induced a level of efficiency, which leads to a reduced cost per borrower along with operating expenses. Recently, Prakash *et al.* (2023) studied the capital structure of Indian corporates by focusing on the study period from 2015 to 2021 in context of Covid-19-19 pandemic and concluded it is adverse influence on leverage. Despite considerable research work, the Indian NBFC sector is still striving to attract any major research in the debt structure scenario. With this perspective, this study delves in the determinants of Indian NBFC sector by focusing on the whole sector comprising of more than 10,000 corporations for the recent dataset. Pathak and Chandani (2023) states the adverse association of profitability, liquidity and non-debt tax shield whereas, company size, growth potential, age and tangibility are found to be positively influencing the capital structure. The paper concludes findings aligned to the trade-off hypothesis.

5. RESEARCH AND METHODOLOGY

Data

The present study derived data for the whole of the Indian non-banking financial sector, comprising 11513 companies, for the period of April 2017 to March 2022. The data regarding the financial statements of the companies is derived from the Prowess IQ database maintained by the Centre for Monitoring the Indian Economy (CMIE). Company-specific financial data includes total assets, leverage, age, current ratio, profitability, return on assets (ROA), and debt service cost on the basis of existing theoretical frameworks and studies. The variables used for the study are described in Table I. It could be due to the shallow debt market in India, which makes it difficult for companies to raise capital through debt instruments. The companies are heavily reliant on banks to raise debt capital. With the central bank tightening regulations around non-performing assets, banks are reluctant to give loans to companies.

Methodology

After deriving the data, panel data methodology is used to evaluate the determinants of the debt structure of the Indian NBFC sector. There are two approaches for panel data namely, fixed effect and random effect model to apply panel data regression. In order to compare the best model between two, the Hausman specification test is performed, and then regression is conducted on the basis of the Hausman results. As the sample includes information from several firms over time, this study employs panel data approaches. Additionally, panel data can provide better and richer variation, enabling the estimation of parameters in a more effective manner (Baltagi, 2011). As panel data estimates are based on numerous observations, they are anticipated to be more reliable (Guha-Khasnobis and Bhaduri, 2002). Also, because the data include both time and cross-sectional dimensions, the problem of multi-collinearity is minimized. The fixed effects model assumes that the slope coefficients are constant across the board and uses this assumption to account for individual firms or a unit collectively by assigning an intercept to each firm. The random effects model, on the other hand, makes the assumption that each unit is uncorrelated and calculates the coefficients as a result. Panel data analysis, according to Chaklader and Chawla (2016), is more reliable than time-series or cross-section modelling because it more accurately reflects the changes between individual cross-sections. According to Chadha and Sharma (2015), panel data offers more detailed information, greater variability, and fewer collinearity problems. Individual heterogeneity is handled by the fixed effect model, which also minimizes the impact of missing data. Pandey (2004) also used it, as it enables the regression to be adjusted for unobserved heterogeneity through individual effects. Daskalakis and Psillaki (2008) used panel data and state that it improves the effectiveness of the econometric models by reducing the problems with collinearity among the independent variables. Additionally, they permit the inclusion of dynamic effects. The results are presented after controlling for heteroscedasticity and serial correlation. Robust standard errors are used to control heteroscedasticity and serial correlation. Further, to check the reliability of the results, two-stage linear regression is also conducted to detect the presence of endogeneity. Apart from this, the study focused on moderation in the analysis to study the differentiated influence of COVID-19 on the basis of size. The basic purpose is to observe whether the breakout of the pandemic influenced the NBFCs differently on the basis of their size. As there is not much research work in this field in Indian NBFCs, basic methodology is preferred to start with. Following is the equation:

$$DR_{i,t} = \beta_0 + \beta_1 \text{Size} + \beta_2 Profitability_{it} + \beta_3 Age_{it} + \beta_4 Growth_{it} + \beta_5 Covid * Size_{it} + \beta_6 Liquidity_{it} \quad (1)$$

$$LDR_{i,t} = \beta_0 + \beta_1 \text{Size} + \beta_2 Profitability_{it} + \beta_3 Age_{it} + \beta_4 Growth_{it} + \beta_5 Covid * Size_{it} + \beta_6 Liquidity_{it} \quad (2)$$

$$SDR_{i,t} = \beta_0 + \beta_1 \text{Size} + \beta_2 Profitability_{it} + \beta_3 Age_{it} + \beta_4 Growth_{it} + \beta_5 Covid * Size_{it} + \beta_6 Liquidity_{it} \quad (3)$$

Where variables are as discussed in Table 1

Table I: Variables of the study

Dependent Variable	
Debt	Following Handoo and Sharma, (2014), Debnath, (2015), Prakash (2023) TDR - Total debt/Total assets STDR - Short-term debt/Total assets LTDR - Long-term debt/Total assets
Independent Variables	
Size	The natural logarithm of total assets at the fiscal year end.
Profitability	Net profits/Net Sales.
Age	Natural log (1+age).
Growth	Return on Assets depicting growth and efficiency of the company as derived from prowess IQ.
Debt service	Interest coverage ratio as derived from Prowess IQ.
Liquidity	Current assets/ Current Liabilities as derived from Prowess IQ.

6. ANALYSIS

Descriptive Statistics

Table 2 presents the results for the descriptive statistics for the debt ratio as studied in three ways. First, debt ratio presents the overall debt to asset ratio followed by long term debt ratio and short term debt ratio. Further the results are presented for both aw and winsorised figures. The table presents the year wise analysis of study variables. As observed from the mean values the debt ratio shows an increasing trend over the years with overall mean value of 6.22 percent and 1.67 percent respectively for raw and winsorised numbers. The variation in raw and winsorised number also depicts the presence of outliers in the data. However if , the short term and long term trend is observed, it can be seen that NBFC's invest themselves considerably in short term debts as compared to the long term debts. Further, in line with the overall results the mean (winsorised) figures for short term and long term debts are 3.57(1.31) percent and 3.16 (1.15) percent. If these findings are to be observed in comparison of the Prakash (2022), which basically focus on Non-Financial Sector, it can be observed that all the three measure have average values higher than the number presented corporates in Prakash (2022). Not only this, as compared to NBFCs the study had shown the major contribution of long term debt than short term debt for corporates in India.

Table II: Descriptive Statistics

		Raw			**Winsorised**		
Year		**Debt ratio**	**Long term debt ratio**	**Short term debt ratio**	**Debt ratio**	**Long term debt ratio**	**Short term debt ratio**
2018	**Mean**	5.160	2.152	2.748	1.522	0.959	1.089
	Median	0.383	0.231	0.155	0.383	0.231	0.155
	N	4076	2217	2307	4076	2217	2307
2019	**Mean**	7.037	2.392	4.047	1.687	1.165	1.225
	Median	0.385	0.234	0.170	0.385	0.234	0.170
	N	3998	1932	2019	3998	1932	2019
2020	**Mean**	6.624	3.355	4.167	1.703	1.220	1.309
	Median	0.347	0.222	0.146	0.347	0.222	0.146
	N	4003	1842	1986	4003	1842	1986
2021	**Mean**	7.623	5.762	3.758	1.894	1.402	1.552
	Median	0.353	0.234	0.145	0.353	0.234	0.145
	N	3772	1711	1803	3772	1711	1803
2022	**Mean**	4.406	2.464	3.167	1.554	1.084	1.503
	Median	0.331	0.199	0.135	0.331	0.199	0.135
	N	3202	1457	1474	3202	1457	1474
Total	**Mean**	6.222	3.169	3.570	1.674	1.158	1.314
	Median	0.363	0.226	0.150	0.363	0.226	0.150
	N	19051	9159	9589	19051	9159	9589

Correlation

Before moving ahead with the determinant of debt in NBFCs, a correlation analysis is conducted to provide an overview along with an evaluation of multicollinearity. The table shows that there is no serious presence of multicollinearity, as the results for all three forms of debt ratio have a correlation coefficient less than 0.8 (Baltagi, 2011). Apart from that, a VIF table is also presented, which presents a VIF value less than 10 for all three measures of debt (DR, LDR, and SDR), depicting that there is no presence of multicollinearity in the data.

Table III: Correlation Analysis

Panel I: Correlation for Debt Ratio						
Variables	**DR**	**Age**	**Profitability**	**ROA**	**Liquidity**	**Size**
DR	1					
Age	-0.019*	1				
Profitability	0.015	-0.015	1			
ROA	-0.074*	0	-0.046*	1		
Liquidity	-0.003	-0.001	-0.003	0.002	1	
Size	-0.109*	0.006	-0.018	0.025*	0.027*	1
Panel II: Correlation for Long term Debt Ratio						
Variables	**LDR**	**Age**	**Profitability**	**ROA**	**Liquidity**	**Size**
LDR	1					
Age	-0.012	1				
Profitability	0.027	-0.015	1			
ROA	-0.078*	0	-0.046*	1		
Liquidity	-0.003	-0.001	-0.003	0.002	1	
Size	-0.123*	0.006	-0.018	0.025*	0.027*	1
Panel III: Correlation for Short term Debt Ratio						
Variables	**SDR**	**Age**	**Profitability**	**ROA**	**Liquidity**	**Size**
SDR	1					
Age	-0.008	1				
Profitability	0.012	-0.015	1			
ROA	-0.203*	0	-0.046*	1		
Liquidity	-0.008	-0.001	-0.003	0.002	1	
Size	-0.206*	0.006	-0.018	0.025*	0.027*	1

** presents significance at 1%*

Variable	**VIF**	**1/VIF**	**VIF**	**1/VIF**	**VIF**	**1/VIF**
	DR		**LDR**		**SDR**	
Age	1.02	0.979234	1.06	0.944856	1.04	0.958332
Size	1.64	0.608416	1.61	0.620803	1.56	0.640047
Profitability	1	0.996748	1	0.996991	1.02	0.98162
Growth	1.01	0.986172	1.01	0.988411	1.04	0.962551
Liquidity	1	0.999752	1	0.999609	1	0.998198
Mean VIF	2.44		2.59		2.59	

It illustrates that strong financials and equity strength motivate organizations to invest in debt, whereas large size, maturity in age, better growth perspectives, service cost of debt (interest coverage), and liquidity refrain them from indulging in debt. The results for the long-term debt ratio and the short-term debt ratio are in line with the total debt ratio, except for liquidity in the case of the long-term debt ratio and profitability, age, and debt service in the case of the short-term debt. These variables are found to be insignificantly related to the presence of debt in the structure.

Regression Analysis

Table IV: Regression Analysis

VARIABLES	**DR**	**LDR**	**SDR**	**DR**	**LDR**	**SDR**	**DR**	**LDR**	**SDR**
	Panel I:Raw Results			***Panel II: Robust Standard Errors***			***Panel III: Endogenity Controlled***		
1.covid	1.145	2.611***	1.934***	1.145	2.611**	1.934***	0.430**	0.0225	-0.00223
	(-0.386)	(0.00)	(-0.00108)	(-0.383)	(-0.0374)	(-0.0036)	(-0.0129)	(-0.309)	(-0.945)

Size	-2.688***	-1.352***	-3.206***	-2.688*	-1.352**	-3.206***	-1.272***	-0.00266	-0.0429***
	(0.00)	(0.00)	(0.00)	(-0.0998)	(-0.0163)	(-0.0013)	(0.00)	(-0.814)	(-0.00951)
Covid*Size	-0.319	-0.431***	-0.358***	-0.319**	-0.431**	-0.358***	-0.0498**	-0.00323	0.00473
	(-0.144)	(0.00)	(-0.00121)	(-0.0246)	(-0.0356)	(-0.009)	(-0.05)	(-0.411)	(-0.4130
Growth	-0.130***	-0.00212***	-0.0452***	-0.13	-0.00212	-0.0452	-0.0146***	-0.00563***	-0.00416***
	(0.00)	(-0.0022)	(0.00)	(-0.304)	(-0.436)	(-0.252)	(0.00)	(0.00)	-(0.00)
Age	9.764**	0.374	3.183**	9.764*	0.374	3.183*	1.914***	-0.0983**	-0.113
	(-0.0105)	(-0.668)	(-0.0451)	(-0.0587)	(-0.433)	(-0.0671)	(0.00)	(-0.0262)	(-0.13)
Profitability	-0.000185*	0.0000*	-0.000148***	-0.0002	0.000	-0.0001	0.000	-0.000***	-0.000***
	(-0.0537)	(-0.0921)	(0.00)	(-0.565)	(-0.291)	(-0.407)	(-0.953)	(-0.00)	(-0.000)
Liquidity	0.00121	0.00056	0.00269	0.00121	0.00056	0.00269	-0.000687	0.000102	-0.00168***
	(-0.81)	(-0.669)	(-0.602)	(-0.311)	(-0.22)	(-0.268)	(-0.657)	(-0.591)	(-0.000)
Constant	-15.81	5.874**	5.409	-15.81	5.874**	5.409	1.732	0.699***	0.931***
	(-0.183)	(-0.0319)	(-0.281)	(-0.344)	(-0.011)	(-0.308)	(-0.198)	(0.00)	(0.00)
Observations	8,034	3,928	4,183	8,034	3,928	4,183	4,917	2,326	2,408
R-squared	0.218	0.069	0.196	0.218	0.069	0.196			
Number of id	2,725	1,556	1,788	2,725	1,556	1,788	1,841	1,048	1,170

, **, * presents significance at 10%,5%,1% respectively*

NBFCs are a major part of the financial system. The debt structure of NBFCs is not only of importance to the company but also to the whole economy. Like banks, NBFCs hold significant responsibility for the corporate sector of an economy, especially in emerging economies like India. Table IV presents the regression results for the determinants of the debt structure of NBFCs in India. For conducting the analysis, panel data is used, and effects are assessed on the basis of Hausmann. Further, the results are controlled for the presence of any form of heteroscadicity or autocorrelation existing in the data. The results are presented for both the raw data and the robust data. Insert Table IV. Panel 1 of Table IV presents the raw results. These results are derived after using fixed effects for the panel data. The Hausman test was conducted using both random and fixed effects. The figures present the significant influence of the COVID-19 breakout on the LDR (2.611) and SDR (1.934), whereas there is no significant influence of the pandemic breakout on the DR. It is in line with the results presented by Chakarbarti and Chakarbarti (2019) and Prakash *et al.* (2023). If the results for size on the basis of total assets are observed, it can be seen that the size of the organization is adversely related to debt, whether it is total, long-term, or short-term. It leads to the interpretation that large NBFCs in India have lower debt levels, whereas small NBFCs rely more on the debt in the structure. Further, studying the debt behavior of NBFCs during the pre-Covid-19 and post-Covid-19 periods, it can be seen that, as compared to the pre-Covid-19 period, during the post-Covid-19 period, the presence of debt is higher in small corporations, especially the LDR (0.431) and SDR (0.358). On similar lines, when he results are controlled for heteroskadicity and autocorrelation by using robust standard errors, the Debt ratio depicting the total debt as compared to asset is also find to be significant (0.319). Total debt also depicts the negative coefficient value depicting that as compared to pre-Covid-19 years, during post-Covid-19 year's small size of NBFCs have higher level of debt and large NBFCs have lower level of debt. The reliability of results is further evaluated by studying the presence of endogeneity following Mangala and Dhanda (2022).

Debt service cost i.e. interest coverage ratio is used as instrumental variable with two stage least square method for controlling the endogeneity. The results present in Panel III depicet4ed that only Total debt ratio reflects the influence of Covid-19 and that too with positive coefficient (0.430) depicting that eruption of pandemic significantly induced the presence of debt in the capital structure. Similarly, when studied on the basis of interaction, it is found that as compared to pre-Covid-19 years during post-Covid-19 years size of the NBFCs is adversely associated with presence of total debt (0.0498). However, the difference is that the results exist only for total debt in contrast to the LDR and SDR to robust standard errors and raw results. Overall the results, state that Indian NBFCs prefer to rely more on the debt whether, it is total, long term or short term debt ratio as compared to the corporates. . The results of the study are ion concurrence with the existing Indian studies like Prakash *et al.* (2023), Chakarbarti and Chalarbarti (2019), Debnath (2015)

7. CONCLUSION

NBFCs are a major part of the Indian financial system. However, it receives a very limited research focus. The present paper looks into the financial reports of the Indian NBFCs in the context of their debt structure. Like banks, they are a very important part of the Indian economy. The findings of the study support the resilient Indian NBFC sector, which suggests that NBFCs are averse to debt in India. The study of capital structure is one of the most contentious in contemporary corporate finance in emerging nations. It is difficult to determine if the conclusions from theoretical and empirical investigations carried out in industrialized economies also apply to developing ones or whether a different set of determinants influence capital structure in developing countries. Thus, the present study focuses on determining the factors affecting the debt presence of Indian non-banking financial corporations from 2016–2017 to 2021–2022. The debt structure is studied on the basis of the debt-to-asset ratio in three ways, including total debt, long-term debt, and short-term debt. The study reveals that while company size has a significant negative link with debt ratio, the COVID-19 pandemic influenced small corporations' more than large corporations, leading to the need for debt addition. The study further reveals that Indian Non-Banking Financial Companies (NBFCs) prefer to rely more on debt, whether it's total, long-term, or short-term, compared to corporates. The reliability of the results is further evaluated using the two-stage least square method for controlling endogeneity. The total debt ratio reflects the influence of Covid-19, indicating that the pandemic significantly induced the presence of debt in the capital structure. The size of NBFCs is adversely associated with the presence of total debt. The results align with existing Indian studies, such as Prakash *et al.* (2023), Chakarbarti and Chalarbarti (2019), and Debnath (2015). However, the study of COVID-19 depicts that the pandemic influenced small corporations at a greater level than large corporations. Due to this, they have to add debt to their structure. In the context of the capital structure of an Indian company during the study period, both the trade-off theory and the pecking order theory are in play. The outcome shows that, notwithstanding India's underdeveloped economic system, the factors influencing capital structure are largely constant. While this study attempts to fill the research gap in the Indian NBFC sector by analyzing its drivers, future research must have a more specialized focus. This study is anticipated to be useful for managers and policymakers in understanding and addressing the gaps present in the industry and its businesses to make this industry more viable and appealing for future investments. Apart from this, the study should be seen in light of data availability and its scope in the Indian context as its limitations.

REFERENCES

Abu Mouamer, F.M. (2011), "The determinants of capital structure of Palestine-listed companies", *Journal of Risk Finance*, Vol. 12 No. 3, pp. 226-241.

Ahmad-Zaluki, N.A., Campbell, K. and Goodacre, A. (2011), "Earnings management in Malaysian IPOs: the East Asian crisis, ownership control, and post-IPO performance", *The International Journal of Accounting*, Vol. 46 No. 2, pp. 111-137.

Ajit, D., Malik, S. and Verma, V.K. (2013), "Earnings management in India", working paper, SEBI DRG Study.

Ang, J.S., Chua, J.H. and McConnell, J.J. (1982), "The administrative costs of corporate bankruptcy: a note", *The Journal of Finance*, Vol. 37 No. 1, pp. 219-226.

Atici, G. and Gursoy, G. (2011), "Financial crises and capital buffer: evidence from the Turkish banking sector", *Business Perspectives, Banks and Bank Systems International Research Journal*, Vol. 6 No. 1.

Baltagi, B. H., & Baltagi, B. H. (2011). *What Is Econometrics?* (pp. 3-12). Springer Berlin Heidelberg.

Bassiouny, S.W. (2016), "The impact of firm characteristics on earnings management: an empirical study on the listed firms in Egypt", *Journal of Business and Retail Management Research*, Vol. 10 No. 3, pp. 34-45.

Bhaduri, S.N. (2002), "Determinants of capital structure choice: a study of the Indian corporate sector", *Applied Financial Economics*, Vol. 12 No. 9, pp. 655-665, doi: 10.1080/ 09603100010017705.

Bhatia, S. and Singh, B. (2012), "Examining the performance of IPOs: an evidence from India", *Management and*

Labour Studies, Vol. 37 No. 3, pp. 219-251.

Certo, S. T., Daily, C. M., & Dalton, D. R. (2001). Signaling firm value through board structure: An investigation of initial public offerings. *Entrepreneurship theory and practice*, Vol. 26 No. 2, pp. 33-50.

Chaturvedi, C., Pandey, H., Chaturvedi, S., Pachori, V. and Arya, A. (2021). Need of Training among Educators to Roll Back During COVID-19: A descriptive Survey. Bio-Science Research Bulletin, 37(2), 61-68. https://bpasjournals.com/life-sciences/index.php/journal/article/view/75

Chadha, S. and Sharma, A. (2015), "Capital structure and firm performance: empirical evidence from India", *Vision: The Journal of Business Perspective*, Vol. 19 No. 4, pp. 295-302.

Chaklader, B. and Chawla, D. (2016), "A study of determinants of capital structure through panel data analysis of firms listed in NSE CNX 500", *Vision*, Vol. 20 No. 4, pp. 267-277.

Chakrabarti, A. and Chakrabarti, A. (2019), "The capital structure puzzle – evidence from Indian energy sector", *International Journal of Energy Sector Management*, Vol. 13 No. 1, pp. 2-23. https://doi.org/10.1108/IJESM-03-2018-0001

Chauhan, S., Verma, A., & Kumar, C. V. (2022). "Effect of capital structure on the financial and social performance of Indian microfinance institutions." *FIIB Business Review*, 23197145221099677.

Chavali, K., & Rosario, S. (2018). "Relationship between capital structure and profitability: A study of Non-Banking Finance Companies in India." *Academy of Accounting and Financial Studies Journal*, Vol. 22 No.1, pp.1-8.

Copeland, T.E. and Weston, J.F. (1983), Financial Theory and Corporate Policy, Addison Wes-Ley, Reading, MA

Das, R.C. and Jena, S.K. (2016), "Earnings management and equity issue firms: a study in Indian context", *Jindal Journal of Business Research*, Vol. 5 No. 1, pp. 64-85.

Das, R.C., Mishra, C.S. and Rajib, P. (2018), "Firm-specific parameters and earnings management: a study in the Indian context", *Global Business Review*, Vol. 19 No. 5, pp. 1240-1260.

Daskalakis, N. and Psillaki, M. (2008), "Do country or firm factors explain capital structure? Evidence from SMEs in France and Greece", *Applied Financial Economics*, Vol. 18 No. 2, pp. 87-97.

de Jong, A., Kabir, R. and Nguyen, T.T. (2008), "Capital structure around the world: the roles of firmand country-specific determinants", *Journal of Banking & Finance*, Vol. 32 No. 9, pp. 1954-1969, doi: 10.1016/j.jbankfin.2007.12.034.

Debnath, P. (2015). "Firm characteristics and capital structure: Evidence from BSE listed nonbanking financial companies in India." *Management Convergence*, Vol. 6 No.2, pp. 37-44.

Demirguç-Kunt, A. and Maksimovic, V. (1999), "Institutions, financial markets, and firm debt maturity", *Journal of Financial Economics*, Vol. 54 No. 3, pp. 295-336, doi: 10.1016/S0304- 405X(99)00039-2.

Demirguç-Kunt, A., Martinez Peria, M.S. and Tressel, T. (2020), "The global financial crisis and the capital structure of firms: was the impact more severe among SMEs and non-listed firms?", *Journal of Corporate Finance*, Vol. 60, 101514, doi: 10.1016/j.jcorpfin.2019.101514.

Dhamija, S. and Arora, R.K. (2017), "Determinants of long-run performance of initial public offerings: evidence from India", *Vision: The Journal of Business Perspective*, Vol. 21 No. 1, pp. 35-45.

Diamond, D.W. (1989), "Reputation acquisition in debt markets", *Journal of Political Economy*, Vol. 97 No. 4, pp. 828-862, doi: 10.1086/261630.

Esperança, J. and Matias, F. (2005), "Finanças Empresariais", Dom Quixote

Fama, E.F. and French, K.R. (2002), "Testing trade-off and pecking order predictions about dividends and debt", *The Review of Financial Studies*, Vol. 15 No. 1, pp. 1-33.

Frank, M.Z. and Goyal, V.K. (2003), "Testing the pecking order theory of capital structure", *Journal of Financial Economics*, Vol. 67 No. 2, pp. 217-248.

Goergen, M., Khurshed, A., & Mudambi, R. (2007). "The long-run performance of UK IPOs: can it be predicted?." *Managerial Finance*, Vol. 33 No. 6, 401-419.

Graham, J.R. (2000), "How big are the tax benefits of debt?", *The Journal of Finance*, Vol. 55 No. 5, pp. 1901-1941, doi: 10.1111/0022-1082.00277.

Graham, J.R., Leary, M.T. and Roberts, M.R. (2015), "A century of capital structure: the leveraging of corporate America", *Journal of Financial Economics*, Vol. 118 No. 3, pp. 658-683, doi: 10.1016/j. jfineco.2014.08.005.

Guha-Khasnobis, B. and Bhaduri, S. (2002), "Determinants of capital structure in India (1990-1998)", *Journal of Economic Integration*, Vol. 17 No. 4, pp. 761-776

Hall, G., Hutchinson, P. and Michaelas, N. (2000), "Industry effects on the determinants of unquoted SMEs' capital structure", *International Journal of the Economics of Business*, Vol. 7 No. 3, pp. 297-312.

Handa, R. and Singh, B. (2017), "Performance of Indian IPOs: an empirical analysis", *Global Business Review*, Vol. 18 No. 3, pp. 734-749.

Handoo, A., & Sharma, K. (2014). "A study on determinants of capital structure in India." *IIMB Management review*, Vol *26* No. 3, pp. 170-182.

Harris, M. and Raviv, A. (1990), "Capital structure and the informational role of debt", *The Journal of Finance*, Vol. 45 No. 2, pp. 321-349, doi: 10.1111/j.1540-6261.1990.tb03693.x.

Harris, M. and Raviv, A. (1991), "The theory of capital structure", *The Journal of Finance*, Vol. 46 No. 1, pp. 297-355.

Hirschleifer, D.I. and Thakor, A. (1989), "Managerial reputation, project choice and dept", Working Paper, Anderson Graduate School of Management at UCLA, pp. 14-89.

Hovakimian, A., Opler, T. and Titman, S. (2001), "The debt-equity choice", *Journal of Financial and Quantitative Analysis*, Vol. 36 No. 1, pp. 1-24..

Islam, M.A. and Osman, J.B. (2011), "Development impact of non-bank financial intermediaries on economic growth in Malaysia: an empirical investigation", *International Journal of Business and Social Science*, Vol. 2 No. 14, pp. 187-198.

Jensen, M. and Meckling, W. (1976), "Theory of the firm: managerial behavior, agency costs and ownership structure", *Journal of Financial Economics*, Vol. 3, pp. 305-360.

Jensen, M.C. (1986), "Agency costs of free cash flow, corporate finance, and takeovers", *The American Economic Review*, Vol. 76 No. 2, pp. 323-329.

Kenc, T. and Dibooglu, S. (2010), "The 2007–2009 financial crisis, global imbalances and capital flows: Implications for reform", *Economic Systems*, Vol. 34 No. 1, pp. 3-21.

Kraus, A. and Litzenberger, R.H. (1973), "A state-preference model of optimal financial leverage", *The Journal of Finance*, Vol. 28 No. 4, pp. 911-922.

Leary, M.T. and Roberts, M.R. (2010), "The pecking order, debt capacity, and information asymmetry", *Journal of Financial Economics*, Vol. 95 No. 3, pp. 332-355, doi: 10.1016/j.jfineco. 2009.10.009.

Leland, H.E. and Pyle, D.H. (1977), "Informational asymmetries, financial structure, and financial intermediation", *The Journal of Finance*, Vol. 32 No. 2, p. 371, doi: 10.2307/2326770.

Lukose, P.J. and Rao, S.N. (2003), "Operating performance of the firms issuing equity through rights offer", Vikalpa: *The Journal for Decision Makers*, Vol. 28 No. 4, pp. 25-40.

Maheshwari, Y. and Agrawal, K. (2015), "Impact of IPO grading on earnings management", *Journal of Financial Reporting and Accounting*, Vol. 13 No. 2, pp. 142-158.

Modigliani, F. and Miller, M.H. (1958), "The cost of capital, corporation finance and the theory of investment", *The American Economic Review*, Vol. 48 No. 3, pp. 261-297.

Modigliani, F. and Miller, M.H. (1963), "Corporate income taxes and the cost of capital: a correction", *The American Economic Review*, Vol. 53 No. 3, pp. 433-443.

Myers, S.C. (1977), "Determinants of corporate borrowing", *Journal of Financial Economics*, Vol. 5 No. 2, pp. 147-175.

Myers, S.C. (1984), "The capital structure puzzle", *The Journal of Finance*, Vol. 39 No. 3, pp. 574-592, doi; 10.1111/j.1540-6261.1984.tb03646.x.

Myers, S.C. and Majluf, N.S. (1984), "Corporate financing and investment decisions when firms have information that investors do not have", *Journal of Financial Economics*, Vol. 13 No. 2, pp. 187-221, doi: 10.1016/0304-405X(84)90023-0

Ozkan, A. (2001), "Determinants of capital structure and adjustment to long run target: evidence from UK company panel data", *Journal of Business Finance & Accounting*, Vol. 28 Nos 1-2, pp. 175-198.

Pandey, I. (2004), "Capital structure, profitability and market structure: evidence from Malaysia", *Asia Pacific Journal of Economics and Business*, Vol. 8 No. 2, pp. 78-91.

Pathak, M. and Chandani, A. (2023), "The nexus between capital structure and firm-specific factors: evidence from Indian companies", *Journal of Economic and Administrative Sciences*, Vol. 39 No. 2, pp. 470-487. https://doi.org/10.1108/JEAS-02-2021-0028

Pettit, R.R. and Singer, R.F. (1985), "Small business finance: a research agenda", *Financial Management*, pp. 47-60.

Prakash, N., Maheshwari, A. and Hawaldar, A. (2023), "The impact of Covid-19-19 on the capital structure in emerging economies: evidence from India", *Asian Journal of Accounting Research*, Vol. 8 No. 3, pp. 236-249. https://doi.org/10.1108/AJAR-05-2022-0144

Rahman, M.M., Khaled Rahman, S.M. and Ahmed, S. (2023), "Determinants of efficiency of non-bank financial institutions: an empirical evidence from Bangladesh", *Asian Journal of Economics and Banking*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/AJEB-07-2022-0092

Rajan, R.G. and Zingales, L. (1995), "What do we know about capital structure? Some evidence from international data", *The Journal of Finance*, Vol. 50 No. 5, pp. 1421-1460, 10.1111/j.1540-6261. 1995.tb05184.x.

Ritter, J.R. (1991), "The long-run performance of initial public offerings", *The Journal of Finance*, Vol. 46 No. 1, pp. 3-27.

Ross, S.A. (1977), "The determination of financial structure: the incentive-signalling approach", *The Bell Journal of Economics*, pp. 23-40.

Sahoo, S. and Rajib, P. (2010), "After market pricing performance of initial public offerings (IPOs): Indian IPO market 2002–2006", *Vikalpa: The Journal for Decision Makers*, Vol. 35 No. 4, pp. 27-44.

Shrestha, M.B. (2007), Role of Non-bank Financial Intermediation: Challenges for Central Banks in the SEACEN Countries, The South East Asian Central Banks (SEACEN), Malaysia

Shukla, A.K. and Shaw, T.S. (2018), "Operating performance of initial public offerings firms after issue in India–a revisit", working paper, Reserve bank of India, India.

Stulz, R. (1990), "Managerial discretion and optimal financing policies", *Journal of Financial Economics*, Vol. 26 No. 1, pp. 3-27.

Sufian, F. (2008), "The efficiency of non-bank financial intermediaries: empirical evidence from Malaysia", *The International Journal of Banking and Finance*, Vol. 5 No. 2, pp. 149-167.

Titman, S. and Wessels, R. (1988), "The determinants of capital structure choice", *The Journal of Finance*, Vol. 43 No. 1, pp. 1-19

Vittas, D. (1997), "The role of non-bank financial intermediaries in Egypt and other MENA countries", World Bank Policy Research Working Paper, 1892, pp. 1-41

Warner, J.B. (1977), "Bankruptcy costs: some evidence", *The Journal of Finance*, Vol. 32 No. 2, pp. 337-347.