Decoding the determinants Influencing Market Capitalization in Non-Banking Financial Companies: Fixed Effect Analysis

Dr Chitra Gounder[1], Sanket Agarwal[2]

[1]Professor Thakur Institute of Management Studies and Research, Mumbai
[2]Senior Executive – Finance and Accounts, Aakshya Infra Projects Pvt.Ltd.
Mail id : nitie.chitra@gmail.com and sanketagarwal05@gmail.com

Abstract

With a focus on the years 2019–20 to 2023–24, this study examines the factors that influence the market capitalisation of Non-Banking Financial Companies (NBFCs) in India. The study examines how the market capitalisation of five chosen NBFCs is affected by important financial variables, such as Non-Performing Assets (NPA), Enterprise Value, Earnings Per Share (EPS), Price-to-Earnings (P/E) Ratio, Net Profit, Total Assets, and Book Value, using a fixed-effects regression model. The results show that market capitalisation is highly influenced by Enterprise Value, EPS, Total Assets, and Book Value, with Enterprise Value exhibiting the largest positive association. Book value has a positive correlation with increased market valuation, however EPS and total assets show negative associations with market capitalisation, indicating complicated dynamics in the NBFC sector. Net profit and non-performing assets exhibit some degree of importance. highlighting the significance of profitability and credit quality. However, in this case, market capitalisation is not greatly impacted by the P/E ratio. The robustness of the model is highlighted by the fact that it accounts for about 98.56% of the variation in market capitalisation. These findings offer insightful information to investors and financial managers working in the NBFC industry, advancing knowledge of the elements influencing market value and emphasising the intricate relationships among asset management, investor confidence, and financial health in the Indian NBFC environment.

Keywords: NBFC, Market Capitalization, Fixed Effect Analysis, Non-Performing Assets (NPA), Enterprise Value, Earnings Per Share (EPS), Price-to-Earnings (P/E) Ratio, Net Profit, Total Assets, and Book Value : AMS Subject ClassificationCodes91G50,91B82,62P20 ,91G10 ,62J10 .

Introduction

To strengthen the stability and resilience of the NBFC industry, the Reserve Bank of India (RBI) has implemented a number of strict regulatory measures in recent years. Stricter capital adequacy and liquidity standards are being implemented as part of these reforms to make sure NBFCs have enough capital buffers and liquidity to survive financial crises. For example, NBFCs must retain high-quality liquid assets equal to at least 100% of their net cash outflows over a 30-day period, per the RBI's updated rules on the Liquidity Coverage Ratio (LCR). To further increase accountability, transparency, and general management practices in NBFCs, stricter corporate governance regulations have been put in place. The goals of these reforms are to safeguard investors, boost market trust, and encourage the industry's sustainable expansion. The quick uptake of fintech and digital lending platforms is causing a significant digital revolution in India's NBFC industry. The way NBFCs function has been completely transformed by these technological developments, which allow them to provide smooth, effective, and customer-focused services. NBFCs are now able to make more accurate lending decisions and efficiently manage credit risks thanks to the growing usage of artificial intelligence (AI) and machine learning for credit scoring and risk management. AI-powered algorithms, for instance, can evaluate enormous volumes of data to forecast a borrower's creditworthiness, which lowers the chance of default. In addition to increasing operational effectiveness, this digital transformation broadens NBFCs' customer base and enables them to serve untapped regions.

Due to a number of mergers and acquisitions, the NBFC industry has seen substantial market concentration. As a result of this tendency, there are now fewer but more powerful NBFCs that may increase their competitive edge and realise economies of scale. NBFCs benefit from consolidation by increasing their financial soundness, cutting expenses, and streamlining operations. One notable example is the combination of Capital First and IDFC Bank to become IDFC First Bank, which has expanded its financial services and product offerings by utilising the strengths of both companies. It is anticipated that these consolidations will result in stronger institutions that are better equipped to handle market difficulties and seize expansion opportunities. By increasing loan availability in rural and semi-urban areas, NBFCs have played a crucial role in promoting financial inclusion in India. These businesses have created specialised financial products to address the requirements of marginalised populations. Many people and small enterprises now have access to formal credit thanks to programs like microfinance loans, small-ticket personal loans, and affordable housing finance. To promote economic development and enhance livelihoods, NBFCs such as Mahindra Finance and Muthoot Finance, for example, have been instrumental in offering financial services to rural communities. The larger national goal of inclusive growth and economic empowerment is in line with this emphasis on financial inclusion.

The post-COVID-19 economic recovery has led to a rising demand for credit, presenting significant opportunities for NBFCs. As economic activities rebound and consumer confidence improves, there has been an increased need for loans across various sectors, including retail, MSMEs (Micro, Small, and Medium Enterprises), and infrastructure. Government initiatives aimed at supporting MSMEs and boosting infrastructure development have further fuelled this demand. For instance, the Indian government's Emergency Credit Line Guarantee Scheme (ECLGS) has provided substantial credit support to MSMEs, helping them recover from the pandemic-induced economic downturn. These developments underscore the critical role of NBFCs in financing economic growth and supporting the recovery process. the NBFC sector in India is experiencing transformative changes driven by regulatory reforms, digital innovation, market consolidation, a strong focus on financial inclusion, and the economic recovery post-pandemic. These trends are shaping a more resilient, efficient, and inclusive financial landscape, positioning NBFCs to play a pivotal role in the country's economic development.

Market capitalization, a key financial metric, represents the total market value of a company's outstanding shares and is a significant indicator of a company's overall valuation and financial health. For Non-Banking Financial Companies (NBFCs), market capitalization reflects the market's assessment of their value and growth potential. This study aims to identify the key determinants of market capitalization for NBFCs using a fixed-effects model, focusing on factors such as Enterprise Value, Net Non-Performing Assets, Earnings Per Share (EPS), Price-Earnings Ratio (P/E Ratio), Net Profit, Total Assets, and Book Value.

The primary objective of this research is to analyse and identify the critical financial determinants of market capitalization for NBFCs over a five-year period. The study employs a fixed-effects model to isolate the effects of various financial metrics on market capitalization, providing insights for investors and financial managers. The study uses panel data consisting of 25 observations from 5 NBFCs over the last five years from 2019-20 to 2023-24. This dataset includes comprehensive financial statements and market data for the selected companies. A fixed-effects regression model is used to account for time-invariant characteristics of the NBFCs, isolating the impact of explanatory variables on market capitalization. Dependent Variable: Market Capitalization & Independent Variables: Net Non-Performing Assets, Enterprise Value, EPS (annualized), Price-Earnings Ratio, Net Profit, Total Assets, and Book Value.

Review of Literature

A key indicator of a company's worth is its market capitalisation, which shows its potential for growth, investor confidence, and financial stability. Stakeholders in Non-Banking Financial Companies (NBFCs), which are important to India's financial industry, must comprehend the factors that influence market capitalisation. Using knowledge from earlier studies, this literature review methodically investigates the variables affecting NBFC market capitalisation in order to lay the groundwork for fixed-effects panel analysis.

By combining market capitalisation, debt, and liabilities, enterprise value (EV) provides a thorough assessment of a company's value. According to Damodaran [4], EV is essential for comprehending comprehensive valuation since it takes into account not only equity valuation but also operational breadth and financial leverage. Shaik et al. [16] reaffirmed the significance of EV in the NBFC sector, highlighting its strong correlation with market capitalisation.

This link emphasises how important it is to take into account both debt and equity when determining an NBFC's market value. Asset quality, especially Non-Performing Assets (NPAs), has a significant impact on market capitalisation and affects investor confidence and perceived financial stability. High NPAs and market valuations were found to be negatively correlated by Berger and DeYoung [3], who connected higher risks and inefficiencies to a decline in investor confidence. Given that NBFCs are heavily dependent on credit performance, Ghosh, Latha, and Gupta [7] further underlined the crucial role that NPA management plays in determining profitability and, in turn, market value. Higher market capitalisation has historically been linked to earnings per share (EPS), a crucial profitability indicator. Strong financial performance and investor confidence are the main drivers of the positive correlation between EPS and market valuation, according to Graham and Dodd [8]. Singh [19] noted, however, that this link might be impacted by sustainability issues or regulatory changes, indicating that profitability metrics might operate differently within the NBFC industry.

The Price-to-Earnings (P/E) ratio, which measures market sentiment, is closely related to market capitalisation. P/E ratios and market value were shown to positively correlate by Fama and French [5], with larger ratios indicating investor confidence in long-term performance. Singh [19] confirmed this for NBFCs, where, in spite of sector-specific risks, positive P/E ratios increase investor confidence and market value.

Market capitalisation is strongly influenced by net profit, a clear measure of operational efficacy. Penman [11] showed that greater market value and investor trust are linked to higher earnings. Ghosh, Bhadra, and Mitra [6] extended this link to NBFCs, emphasising the significance of constant profitability for obtaining positive market valuations and the effect of net profit on market views. Another important aspect affecting market capitalisation is the size of the company, as indicated by its total assets and book value. Ohlson [10] illustrated the significance of net assets in investor evaluations by showing a positive link between book value and market valuation. A greater asset base, according to Rajan and Zingales [13], indicates financial stability and boosts investor confidence. Issar [9] confirmed these conclusions for NBFCs, pointing out that greater market capitalisation results from potential for economies of scale and diversification provided by larger asset bases.

The market capitalisation of NBFCs is also significantly shaped by interest rates and macroeconomic variables. Because NBFCs depend on outside funding, Ghosh, Latha, and Gupta [7] discovered that interest rate changes significantly affect their valuations. Phuong et al. [12] also emphasised how macroeconomic variables, like inflation and GDP growth, impact stock market performance and have an indirect impact on NBFC market capitalisation.

The research emphasises how market capitalisation for NBFCs is complicated and involves interactions between macroeconomic conditions, asset quality, capital structure, and financial performance. The valuation process is made more complex by industry-

specific elements like interest rate sensitivity and non-performing asset management. This review indicates that a fixed-effects panel analysis of firm-specific variables provides a more detailed understanding of the factors influencing market capitalisation in the NBFC industry, even though measurements like enterprise value, EPS, and total assets are still important. This study offers a deep grasp of valuation dynamics specific to the NBFC industry's unique features by filling in the gaps in conventional profitability measurements.

Background in Theory

The price of a company's shares multiplied by the total number of outstanding shares is its market capitalisation. It shows how the market evaluates a company's worth and potential for expansion. According to theory, market capitalisation is a good indicator of a company's overall worth and is impacted by a number of financial indicators that show how well the business is doing financially.

Since EV takes into consideration a company's whole capital structure, it offers a thorough assessment of its value and is essential for comprehending market capitalisation [4]. Loans or advances that are in default or nearly in default are known as non-performing assets (NPAs). Increased financial risk and inefficiency are indicated by high NPA levels, which have a negative impact on market capitalisation and investor confidence [3]. EPS calculates a company's profitability on a per-share basis. Strong financial success is reflected in increased EPS, which is typically linked to higher profitability and is anticipated to have a favourable effect on market capitalisation [8]. Investors' willingness to pay for each dollar of a company's earnings is shown by the P/E ratio. According to Fama and French [5], a high P/E ratio indicates that investors anticipate greater future growth and, as a result, a higher market capitalisation. One of the most important measures of a business's profitability and financial stability is its net profit. Since larger net profits indicate solid financial performance and room for expansion, they usually translate into higher market capitalisation [11].

A company's book value is its net asset value, which is determined by subtracting its total liabilities from its total assets. Higher market capitalisation and book value are frequently associated, indicating the stability and soundness of the company's finances [10]. A company's market value is influenced by its capital structure and asset base, which have an impact on its growth potential and financial stability. According to Rajan and Zingales [13], a strong asset base can boost investor confidence and increase market capitalisation.

This study aims to investigate the determinants of market capitalization for Non-Banking Financial Companies (NBFCs) using a fixed effects regression model. The research is designed to assess how various financial indicators such as NPA, Enterprise Value, EPS, PE Ratio, Net Profit, Total Assets, and Book Value influence the market capitalization of NBFCs over time. Objectives of study are to identify and quantify the impact of key financial indicators on market capitalization, to analyse the significance of each variable in predicting market capitalization, to use a fixed effects model to control for unobserved heterogeneity across different NBFCs.

The data was collected from financial reports of NBFCs, stock exchanges, and financial databases such as Bloomberg and Capital Iine. The study will include 5 NBFCs observed over a period of 5 years from 2019 -20 to 2023-24, resulting in a panel dataset with 25 observations.
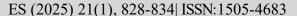
Dependent Variable is Market Capitalization and Independent Variables: NPA (Non-Performing Assets), Enterprise Value, EPS (Earnings Per Share), PE (Price to Earnings) Ratio, Net Profit, Total Assets, Book Value and Control Variable: Company (to account for fixed effects).

$$\text{Market Capitalisation}_{it} = \beta_0 + \beta_1 \text{NPA}_{it} + \beta_2 \text{Enterprise Value}_{it} + \beta_3 \text{EPS}_{it} + \beta_4 \text{PE}_{it} + \beta_5 \text{Net Profit}_{it} + \beta_6 \text{Total Assets}_{it} + \beta_7 \text{Book Value}_{it} + u_i + \epsilon_{it}$$

Where:

- i represents the cross-sectional units (NBFCs).

- t represents the time periods.

- u_i represents the individual-specific effect (fixed effect) for each NBFC.

- ϵ_{it} is the error term.

Fixed Effect Model of Panel Multiple Regresion				
Included 5 cross-sectional units				
Time-series length = 5				
Dependent variable: Market Capitalisation				
Coefficient	**Estimate**	**Std. Error**	**t-ratio**	**p-value**
const	315.064	1278.26	0.2465	0.8092
NPA	27.2556	12.8522	2.121	0.0538 *
Enterprise Value	0.848467	0.129256	6.564	<0.0001 ***
EPS	-143.228	47.4604	-3.018	0.0099 ***
PE	19.5893	37.7675	0.5187	0.6127
Net Profit	-9.71394	4.63176	-2.097	0.0561 *
Total Assets	-2.33003	0.762531	-3.056	0.0092 ***
Book Value	12.3529	5.09944	2.422	0.0308 **
Mean dependent var	5939.459	S.D. dependent var		6379.514
Sum squared resid	14029583	S.E. of regression		1038.845
LSDV R-squared	0.985637	Within R-squared		0.968012
LSDV F(11, 13)	81.09782	P-value(F)		4.05E-10
Log-likelihood	−200.9460	Akaike criterion		425.892
Schwarz criterion	440.5185	Hannan-Quinn		429.9488
rho	−0.084978	Durbin-Watson		1.44482
Joint test on named regressors -				
Test statistic: F(7, 13) = 56.1998				
with p-value = P(F(7, 13) > 56.1998) = 1.04228e-08				
Test for differing group intercepts -				
Null hypothesis: The groups have a common intercept				
Test statistic: F(4, 13) = 14.7949				
with p-value = P(F(4, 13) > 14.7949) = 9.16834e-05				

Market Capitalization$_{it}$=315.064+27.2556×NPA$_{it}$ +0.848467×Enterprise Value$_{it}$−143.228×EPS$_{it}$ +19.5893×PE$_{it}$−9.71394×Net Profit$_{it}$ −2.33003×Total Assets$_{it}$+12.3529×Book Value$_{it}$+u$_i$ +ϵ_{it}

The high R-squared value (0.985637) indicates that the model explains about 98.56% of the variation in market capitalization, suggesting a very good fit. The overall F-statistic is highly significant (p-value = 4.05e-10), indicating that the model is significant and the regressors jointly explain the dependent variable well.

Enterprise Value is Highly significant ($p < 0.0001$). A positive relationship indicates that an increase in Enterprise Value correlates strongly with higher Market Capitalization. EPS (Annualized): Highly significant ($p = 0.0099$) but with a negative coefficient, suggesting that higher EPS might not translate directly into higher Market Capitalization in this context.

Total Assets: Highly significant ($p = 0.0092$) with a negative coefficient, indicating that larger asset bases may not necessarily lead to higher Market Capitalization. Book Value: significant ($p = 0.0308$) with a positive relationship, suggesting that higher Book Value is associated with higher Market

Capitalization.Net Non-Performing Assets and Net Profit: Show some level of significance (p = 0.0538 and p = 0.0561, respectively), indicating that these variables also impact Market Capitalization but to a lesser extent compared to others. Price-Earnings Ratio: Not statistically significant (p = 0.6127), suggesting it does not have a clear impact on Market Capitalization in this model.

The significant test for differing group intercepts (p-value = 9.16834e-05) indicates that the intercepts vary across NBFCs, justifying the use of a fixed effects model. The Durbin-Watson statistic (1.444820) is below 2, suggesting some positive autocorrelation in the residuals, which might need further investigation.

Joint Test on Named Regressors: F(7, 13) = 56.1998 (p-value < 0.0001) which Indicates that the joint effect of the regressors is highly significant. Test for Differing Group Intercepts: F(4, 13) = 14.7949 (p-value < 0.0001) which Shows that there are significant differences in intercepts across the cross-sectional units.

The high LSDV R-squared and Within R-squared values indicate a good fit of the model to the data, suggesting that the model explains a large proportion of the variability in market capitalisation. The significance of several coefficients (Enterprise Value, EPS, Total Assets, Book Value) highlights the importance of these variables in explaining market capitalisation, while others (PE) do not significantly contribute to the model. The marginal significance of NPA and Net Profit suggests that these variables may have some influence, but further investigation or additional data may be needed to confirm their effects. The potential positive autocorrelation (based on the Durbin-Watson statistic) could be addressed in future model refinements. Overall, the model provides valuable insights into the factors affecting market capitalisation.

Conclusion

The fixed effects model effectively explains a substantial portion of the variance in Market Capitalization for NBFCs. Significant predictors include Enterprise Value, EPS, Total Assets, and Book Value. Despite some variables like Net Non-Performing Assets and Net Profit having lesser significance, they still provide valuable insights into market capitalization dynamics. The model's diagnostic results support its robustness, validating the selected predictors for understanding market capitalization variations.

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