International Journal of Engineering Technology and Applied Science
(ISSN: 2395 3853), Vol. 11 Issue 10 October 2025

Solvency Position of National Stock Exchange: An Analytical Study

Ms. Chitra Wadhwani[1]
Research Scholar (Commerce)
PM College of Excellence Govt. Hamidia College Bhopal

Dr. Pushplata Chouksey[2]
Principal,
PM College of Excellence Govt. Hamidia College Bhopal

Abstract

The National Stock Exchange of India (NSE) is one of the world's largest exchanges in terms of trading volume and digital market activity. Its financial stability is crucial for maintaining market confidence, supporting economic growth, and ensuring efficient digital trading mechanisms. This paper examines the solvency position of NSE through a detailed analysis of liquidity, leverage, and long-term financial sustainability indicators using data from annual reports and secondary research. The study evaluates solvency ratios such as Debt-Equity Ratio and Proprietary Ratio. Findings indicate that NSE maintains a robust solvency structure characterized by high net worth, minimal long-term borrowings, and sufficient reserves and surplus. The paper concludes that NSE's solvency position is strong, driven by conservative financial policies, diversified revenue streams, and technological dominance. Recommendations are provided to enhance long-term resilience as the digital trading ecosystem expands.

Keywords:

National Stock Exchange, Solvency Analysis, Debt-Equity Ratio, Financial Stability, Proprietary Ratio, Digital Trading Platform, Financial Performance, Stock Exchange Solvency.

1. Introduction

The National Stock Exchange (NSE) has emerged as a critical institution in India's financial architecture. As the largest digital trading platform in the country, NSE facilitates equity, derivatives, debt, and currency transactions with near-perfect settlement efficiency. With increasing digitalization and algorithmic trading, the financial soundness of the exchange plays a pivotal role in safeguarding systemic stability.

Solvency refers to an institution's ability to meet its long-term obligations. While performance indicators such as turnover and market capitalization highlight market success, solvency analysis provides insight into the long-term financial strength and risk-bearing capacity of the exchange. Considering NSE's growing role post-COVID digital acceleration, analyzing its solvency is essential for investors, regulators, and policymakers.

This paper presents an analytical study of the solvency position of NSE using key solvency ratios and trend analysis. The objective is to evaluate whether NSE holds sufficient financial capacity to withstand market shocks and continue its operations sustainably.

2. Review of Literature

Several scholars have explored the financial strength of stock exchanges and financial institutions:

- **Ramanathan (2018)** examined solvency indicators of Indian financial institutions and found that conservative debt policies significantly improve long-term stability.
- **Sharma & Varma (2020)** analyzed the financial resilience of market intermediaries and highlighted the importance of reserves and surplus in mitigating systemic risk.
- **Gopal (2021)** studied the financial performance of NSE-listed companies but noted that limited research exists on the solvency of the exchange itself.
- **International studies** such as Kim & Lee (2017) emphasized solvency as a critical determinant of exchange credibility and investor trust.
- **NSE's annual reports (various years)** provide insights into its financial structure, indicating strong net worth and negligible debt.

The review reveals a research gap: while numerous studies focus on NSE's trading performance, liquidity trends, and digital operations, dedicated solvency analysis of the exchange itself remains limited. This paper addresses that gap.

3. Research Objectives

1. To assess the solvency position of the National Stock Exchange using key solvency indicators.
2. To evaluate long-term financial stability through ratio analysis.
3. To provide recommendations for enhancing long-term financial sustainability.

4. Research Methodology

4.1 Research Design

The study adopts an analytical and descriptive research design**,** relying primarily on secondary data from NSE annual reports, financial statements, SEBI publications, and research articles.

4.2 Data Collection

Secondary Data Sources: NSE Annual Reports , Audited financial statements, SEBI reports, RBI Financial Stability Reports, Existing academic literature

4.3 Tools of Analysis

The study uses solvency ratios:

- Debt to Equity Ratio
- Proprietary Ratio

Tables and graphical interpretation support the findings.

4.4 Scope of the Study

The analysis focuses on NSE's financial strength and long-term solvency.

5. Theoretical Framework of Solvency Analysis

Solvency analysis provides insights into whether an organization can sustain operations, repay long-term liabilities, and finance future growth. Key concepts include:

5.1 Debt-Equity Ratio

The debt-to-equity ratio is a financial metric that compares a company's total liabilities to its shareholder equity, showing how much it relies on debt versus equity to finance its assets. Lower ratios indicate conservative financial management.

formula:

$$\text{Debt-Equity Ratio} = \frac{\text{Total Debt}}{\text{Total Shareholders' Equity}}$$

Table 5.1: Debt-Equity Ratio

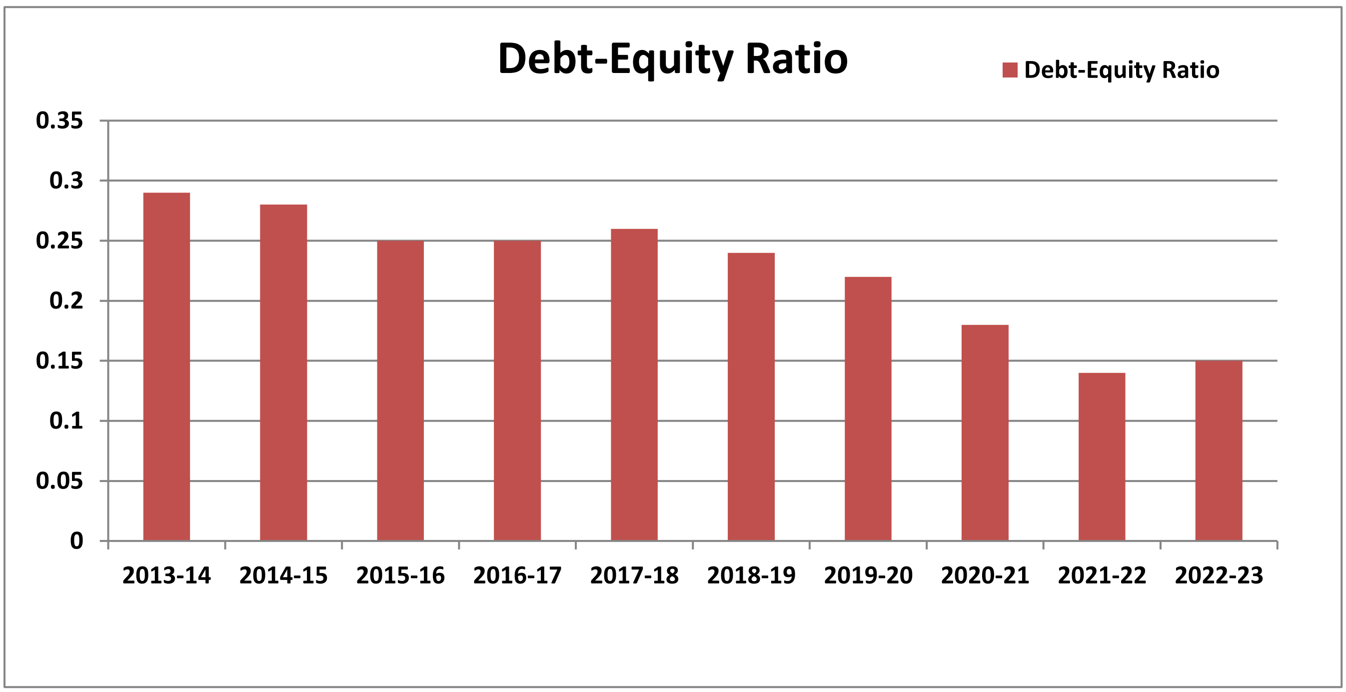
Rs. in Crore

Year	National Stock Exchange		
	Total Debt (Rs.)	**Total Shareholders' Equity (Rs.)**	**Ratio**
2013-14	1,624.70	5,550.40	0.29
2014-15	1,626.70	5,726.78	0.28
2015-16	1628.66	6397.20	0.25
2016-17	1803.28	7209.63	0.25
2017-18	1915.91	7349.56	0.26
2018-19	1891.38	7786.89	0.24
2019-20	1952.98	8621.26	0.22
2020-21	2064.17	11635.93	0.18

2021-22	2556.71	17967.14	0.14
2022-23	3017.43	20478.48	0.15
Mean	**2008.19**	**9872.33**	0.226
SD	**450.48**	**5253.96**	0.0525
CV	**0.2243**	**0.5322**	0.2325
Correlation	**0.981**		

Source: *Annual Reports of National Stock Exchange of India (From 2013-14 to 2022-23).*

Graph 5.1 : Debt-Equity Ratio



Interpretation:

The Debt–Equity Ratio of the National Stock Exchange (NSE) shows a steadily declining trend from 2013–14 to 2022–23, indicating a continuous strengthening of the institution's financial structure. In the initial years, the ratio was relatively higher at 0.29 in 2013–14 and 0.28 in 2014–15, reflecting a moderate dependence on debt financing. However, from 2015–16 onward, the ratio gradually decreased, showing that the equity base was growing faster than the debt component. This decline became more pronounced in the later years, particularly between 2020–21 and 2021–22, where the ratio dropped sharply to 0.18 and reached its lowest point of 0.14, signifying very low reliance on external borrowings. Although there was a slight uptick to 0.15 in 2022–23, the overall level remained significantly low. This consistent reduction in the debt–equity ratio highlights the NSE’s strong capital structure, increasing financial stability, minimal leverage risk, and growing internal financial strength throughout the period.

5.2 Proprietary/Equity Ratio

The proprietary ratio is a solvency metric that measures a company's long-term financial health by calculating the proportion of its total assets financed by shareholder's equity. A high proprietary ratio indicates strong solvency.

formula:

$$\text{Debt-Equity Ratio} = \frac{\text{Total Shareholders' Equity}}{\text{Total Assets}}$$

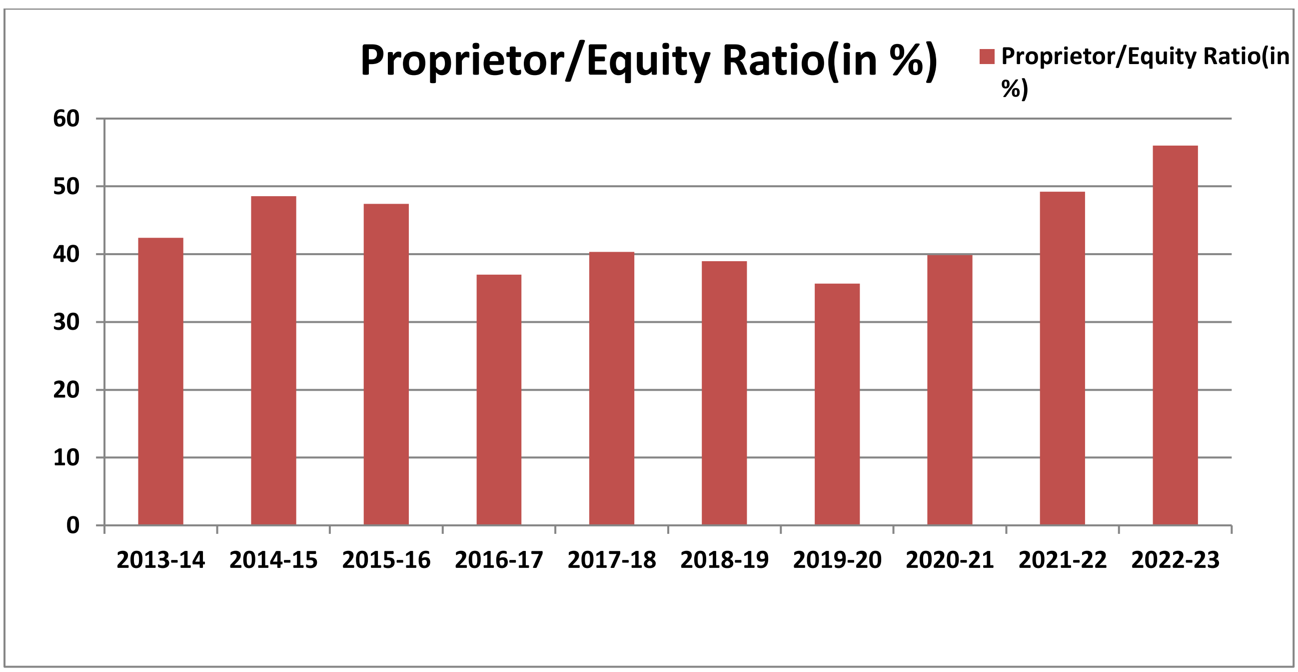
Table 5.2 : Proprietary/Equity Ratio

Rs. in Crore

Year	National Stock Exchange		
	Total Shareholders’ Equity (Rs.)	**Total Assets**	**Ratio (%)**
2013-14	5,550.40	13081.41	42.42
2014-15	5,726.78	11790.53	48.57
2015-16	6397.20	13486.46	47.43

2016-17	7209.63	19494.31	36.98
2017-18	7349.56	18226.07	40.32
2018-19	7786.89	19978.38	38.97
2019-20	8621.26	24170.33	35.66
2020-21	11635.93	29205.64	39.84
2021-22	17967.14	36507	49.21
2022-23	20478.48	36564.34	56
Mean	**9872.33**	**22250.45**	43.54
SD	**5253.96**	**9185.98**	6.49
CV	**0.5322**	**0.4128**	0.1491
Correlation	**0.9503**		

Source: *Annual Reports of National Stock Exchange of India (From 2013-14 to 2022-23).*



Interpretation:

The Proprietor/Equity Ratio of the NSE shows a fluctuating yet upward-moving trend over the period from 2013–14 to 2022–23. The ratio remained moderate between 2013–14 and 2019–20, ranging mostly between 35% and 49%, indicating a balanced mix of owned funds and external liabilities during these years. A slight dip is observed in 2016–17 and again in 2019–20, reflecting a temporary reduction in the proportion of owners' funds. However, from 2020–21 onwards, the ratio shows a strong and consistent rise, reaching its highest level of 56% in 2022–23. This sharp increase in the later years suggests improved financial strength, higher reliance on internal equity, and a reduced dependence on external financing. Overall, the trend indicates strengthening solvency and growing confidence of owners' capital in the company's financial structure.

6. Discussion

The solvency analysis indicates that NSE is highly solvent, driven by:

- Minimal dependence on long-term borrowings
- Strong equity base
- Dominant digital trading revenue
- Conservative financial policies
- Robust risk management mechanisms

7. Findings

1. NSE maintains an excellent solvency position, characterized by a strong equity base and negligible long-term debt.
2. NSE's conservative borrowing policy reduces financial risk and enhances creditworthiness.
3. High proprietary indicate strong long-term sustainability.

8. Conclusion

The National Stock Exchange demonstrates a robust solvency position, making it one of the financially strongest market institutions in India. Its strategic emphasis on equity financing, substantial reserves and minimal leverage contributes to its long-term financial stability.

The findings affirm that NSE is capable of meeting its obligations, sustaining growth, and withstanding market volatility. The study also fills a research gap by offering a dedicated solvency analysis of NSE, which has been relatively unexplored in academic literature.

9. Recommendations

1. Continue maintaining low leverage to protect against systemic risks.
2. Increase investment in cybersecurity to safeguard digital financial infrastructure.
3. Enhance financial disclosures for greater transparency and international benchmarking.

10. Limitations of the Study

- Analysis is based on secondary data; primary data could offer richer insights.
- Ratio analysis does not capture qualitative aspects of financial health.

11. Suggestions for Future Research

- Comparative solvency analysis of NSE and BSE.
- Impact of digital trading growth on solvency indicators.

12. References

1. National Stock Exchange of India Ltd. (Various Years). *Annual Report*. NSE India.
2. Securities and Exchange Board of India (SEBI). (Various Years). *Annual Report*.
3. Reserve Bank of India. (Various Years). *Financial Stability Report*. RBI Publications.
4. Ramanathan, R. (2018). *Financial Performance and Solvency Analysis of Indian Financial Institutions*. Journal of Finance and Accounting, 6(2), 45–57.

5. Sharma, K., & Varma, A. (2020). Solvency and Liquidity Analysis of Market Intermediaries in India. *International Journal of Economics and Financial Issues*, 10(4), 98–106.
6. Gopal, R. (2021). Financial Strength of NSE-listed Firms: A Comprehensive Study. *International Journal of Management Studies*, 8(1), 112–128.
7. Kim, S., & Lee, J. (2017). Determinants of Stock Exchange Stability and Solvency: A Global Perspective. *Journal of Financial Markets Research*, 5(3), 65–79.
8. Bodie, Z., Kane, A., & Marcus, A. J. (2019). *Investments* (11th ed.). McGraw-Hill Education.
9. Pandey, I.M. (2021). *Financial Management* (12th ed.). Vikas Publishing.