The Impact of Financial Ratios on Stock Price Performance: A Quantitative Study of Listed Companies in India

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Abstract

This study examines the impact of key financial ratios—Return on Equity (ROE), Current Ratio (CR), and Debt-to-Equity Ratio (D/E)—on the stock price performance of companies listed on the National Stock Exchange (NSE) of India. Using a sample of 100 firms from the fiscal year 2022–2023, the study applies correlation and multiple regression analyses to assess the influence of these ratios on stock returns.

The results indicate that ROE has a strong and positive relationship with stock returns, highlighting profitability as a crucial driver of market performance. The Current Ratio demonstrates a weak but positive association, suggesting that liquidity plays a moderate role in investor confidence. Conversely, the Debt-to-Equity Ratio exhibits a negative yet statistically insignificant impact on stock returns, indicating that the effect of leverage may vary depending on firm characteristics and market conditions. The regression model explains approximately 41% of the variation in stock returns ($R^2 = 0.41$), indicating a moderate explanatory power of the selected financial ratios.

These findings highlight the importance of financial fundamentals in shaping stock price performance and provide useful insights for investors, financial analysts, and policymakers in evaluating firm performance in emerging markets. In particular, the results emphasize the role of profitability and liquidity in shaping stock market outcomes in emerging economies such as India, offering valuable insights for investors, financial analysts, and policymakers. The study contributes to a better understanding of how financial fundamentals influence equity valuation, thereby supporting more informed investment decisions and policy formulation.

Keywords: *Financial Ratio; National Stock Exchange; Equity Valuation; Positive Relation; Profitability; Leverage*

1. Introduction

Stock prices are influenced by a myriad of factors, ranging from macroeconomic indicators to company- specific financial health. Financial ratios serve as important indicators of a firm's performance and stability. In the context of India's rapidly evolving financial markets, understanding how these ratios affect stock prices can provide valuable insights for investors (Sharma & Singh, 2011). This study aims to explore the predictive power of key financial ratios—Return on Equity (ROE), Current Ratio (CR), and Debt-to-Equity Ratio (D/E)— in predicting stock price performance. Previous studies in the Indian market, such as Agarwal and Srivastava (2018) and Chawla and Srinivasan (2016) also demonstrate that financial ratios significantly influence stock price performance of listed companies.

One of the most critical financial ratios impacting stock performance is Return on Equity (ROE). ROE measures a firm's profitability by revealing how much profit a company generates with the money shareholders have invested. High ROE indicates efficient use of equity capital and often attracts investors seeking superior returns. According to Fama and French (1992), firms with higher ROE tend to deliver higher stock returns, making this metric a strong predictor of price performance. In the Indian context, companies with consistently high ROE generally exhibit stronger investor interest and higher market valuations (Sharma & Singh, 2011).

Liquidity ratios, particularly the Current Ratio, also play a role in stock price movements. This ratio evaluates a company's ability to meet short-term obligations with its current assets. While a very high current ratio may indicate inefficiency in asset utilization, a ratio within the optimal range enhances investor confidence in the company's short-term financial stability. Research by Sehgal and Tripathi (2009) found that companies with stable liquidity ratios tend to experience relatively stable stock prices, especially during economic downturns.

Another important metric is the Debt-to-Equity (D/E) Ratio, which evaluates a firm's financial leverage. Companies with high D/E ratios are considered riskier due to their dependence on external debt, which can impact profitability and long-term viability. However, the impact of D/E on stock performance is more nuanced. While high leverage can amplify returns during profitable periods, it may also lead to sharp declines in stock prices during adverse conditions (Ou & Penman, 1989). In India, investors often exhibit caution towards highly leveraged companies, which is reflected in subdued stock price performance, particularly in volatile markets conditions.

Although several studies have examined the relationship between financial ratios and stock returns (Fama & French, 1992; Ou & Penman, 1989), empirical findings remain inconsistent, particularly in emerging markets such as India. Previous studies, such as Agarwal and Srivastava (2018), Chawla and Srinivasan (2016), and Gupta and Jain (2020) have highlighted the importance of financial ratios in explaining stock performance. However, many of these studies focus on limited financial indicators or rely on older datasets. Therefore, there is a need for updated empirical analysis that simultaneously examines profitability, liquidity, and leverage indicators using recent firm-level data from companies listed on the National Stock Exchange of India.

2. Objectives

General Objective: To assess the correlation between ROE, the Current Ratio, and the debt-to-equity (D/E) ratio and stock price performance.

Specific Objective: - To evaluate the predictive capacity of these financial ratios using regression analysis.

To provide actionable insights for investment decision-making in the Indian stock market.

3. Materials and Methods

Sample and Data Collection: The study included 100 companies from various sectors listed on the NSE. Data for the fiscal year 2022–2023 was collected from company annual reports, NSE records, and the CMIE Prowess database.

Variables

- Dependent Variable: Stock Returns (% change in closing price over FY 2022–2023)
- Independent Variables:

  ROE = Net Income / Shareholder's Equity

  Current Ratio = Current Assets / Current Liabilities

  Debt-to-Equity Ratio = Total Debt / Shareholder's Equity

Statistical Tools: The researcher has used the following statistical tools to analyze the collected data-

- Pearson Correlation Analysis
- Multiple Linear Regression
- Software: SPSS and Excel

4. Results

Data Analysis and Interpretation:

Table 1 Descriptive Statistics of the Variables

Variable	Mean	Std. Dev	Min	Max
ROE (%)	14.23	8.11	-5.12	37.45
Current Ratio	1.87	0.68	0.65	3.9
D/E Ratio	0.76	0.59	0.12	2.85
Stock Return (%)	18.94	22.33	-22.1	78.5

The statistical summary reveals meaningful patterns and variations among these variables, which help to explain both financial health and investor response in the Indian stock market context. Return on Equity (ROE), which reflects a company's profitability in relation to shareholders' equity, shows a mean of 14.23%, with a standard deviation of 8.11. This indicates that, on average, the sampled companies generate a moderate level of profitability for their shareholders. However, the relatively high standard deviation suggests notable variability among companies, with ROE ranging from -5.12% to a strong 37.45%. The negative minimum value highlights that some companies incurred losses, thereby eroding shareholder value. On the other hand, firms with high ROE likely attracted greater investor interest due to more efficient capital utilization, consistent with existing financial literature.

The Current Ratio, which measures a firm's short-term liquidity position, averages 1.87, with a standard deviation of 0.68. This suggests that, on average, firms have nearly twice the amount of current assets relative to current liabilities, indicating good liquidity health. The minimum value of 0.65 implies that some companies may be struggling to meet short-term obligations, while the maximum of 3.90 reflects a highly liquid position. The variability points to different working capital management strategies and sector-specific liquidity needs across companies.

The Debt-to-Equity (D/E) Ratio has a mean of 0.76 and a standard deviation of 0.59, indicating a generally moderate use of leverage among the sampled firms. A minimum of 0.12 signifies that some companies are minimally leveraged or mostly equity-financed, which reduces financial risk. Conversely, the maximum value of 2.85 indicates that some firms rely heavily on debt, which could pose solvency risks in times of declining earnings or market instability. This variation highlights differing capital structures, often driven by industry norms and strategic financial planning.

Finally, Stock Returns (%) show an average return of 18.94%, which represents a robust performance by general market standards. However, the high standard deviation of 22.33% signals substantial volatility in returns. The minimum value of -22.10% suggests that some companies experienced sharp declines in their stock prices during the period, whereas the maximum return of 78.50% reflects substantial growth in others.

Table 2 Correlation Analysis

Variables	Stock Return	ROE	Current Ratio	D/E Ratio
Stock Return	1	0.613**	0.212*	-0.173
ROE		1	0.196	-0.321**
Current Ratio			1	-0.109
D/E Ratio				1

The correlation analysis presented in this study explores the linear associations between stock returns, Return on Equity (ROE), the Current Ratio, and the Debt-to-Equity (D/E) Ratio. The correlation coefficients help determine the strength and direction of these relationships, with particular focus on their statistical significance.

The most prominent finding from the matrix is the strong positive correlation between Stock Returns and ROE ($r = 0.613$, $p < 0.01$). This indicates that as companies' profitability—measured by ROE—increases, their stock returns tend to rise as well. This result aligns with prior empirical studies suggesting that profitable firms are more attractive to investors and thus experience better market performance (Fama & French, 1992). The strength of this relationship underscores ROE as a key predictor of stock return performance in the Indian corporate landscape.

The Current Ratio shows a weak but statistically significant positive correlation with Stock Returns ($r = 0.212$, $p < 0.05$). This suggests that firms with better liquidity positions are marginally more likely to experience higher stock returns. Although this relationship is weaker than that of ROE, it suggests that investors may still consider liquidity as an important factor, particularly during periods of market uncertainty when the ability to meet short-term obligations becomes more critical.

On the other hand, the Debt-to-Equity Ratio exhibits a weak negative correlation with Stock Returns ($r = -0.173$), although the relationship is not statistically significant. This implies that while higher leverage may reduce stock return performance, the relationship is not sufficiently strong to be conclusive. It suggests that leverage alone may not be a reliable predictor of market returns, possibly due to differences in sectoral capital requirements or market perceptions of debt management.

Examining inter-variable relationships, ROE and D/E Ratio exhibit a moderate negative correlation ($r = -0.321$, $p < 0.01$), indicating that highly leveraged firms tend to have lower returns on equity. This is a logical outcome, as higher debt increases interest obligations, which can reduce net income available to shareholders, thereby lowering ROE.

The correlation between ROE and the Current Ratio ($r = 0.196$) is weak and not statistically significant, suggesting minimal linear association between profitability and liquidity in this sample. Similarly, the Current Ratio and Debt-to-Equity (D/E) Ratio show a very weak negative correlation ($r = -0.109$), indicating that firms with better liquidity tend to rely slightly less on debt. However, the relationship is too weak to derive any strong inference.

Table 3 Regression Analysis

Predictor	B	Std. Error	t	Sig.
(Constant)	5.31	4.23	1.25	0.215
ROE	0.92	0.18	5.11	0.000*
Current Ratio	3.47	1.52	2.28	0.025*
D/E Ratio	-2.58	1.96	-1.32	0.189

The ROE variable emerges as the most significant predictor of stock returns, with a coefficient (B) of 0.92 and a t-value of 5.11, which is highly significant ($p < 0.001$). This indicates that for every one-unit increase in ROE, the stock returns increase by approximately 0.92 percentage points, holding other variables constant. This result reinforces findings from both the descriptive and correlation analyses, confirming ROE as a robust indicator of market performance. The strong statistical significance suggests that investors reward firms that deliver higher returns on equity, perceiving them as more efficient in generating profits from shareholders' capital.

The Current Ratio also has a positive and statistically significant impact on stock returns ($B = 3.47$, $p = 0.025$). This implies that, all else equal, an increase of one unit in the current ratio is associated with an increase of approximately 3.47 percentage points in stock returns. While the effect size is notable, the standard error (1.52) and moderate t-value (2.28) suggest the effect is present but not overwhelmingly strong. This finding indicates that liquidity, while not as influential as profitability, still plays a meaningful role in shaping investor confidence, particularly in markets sensitive to short-term risk and operational efficiency.

In contrast, the Debt-to-Equity (D/E) Ratio has a negative coefficient ($B = -2.58$), indicating an inverse relationship with stock returns. However, the result is not statistically significant ($p = 0.189$). This suggests that higher financial leverage tends to be associated with lower stock returns, but this effect is not strong enough to draw definitive conclusions in this sample. The lack of statistical significance may be due to industry-specific debt norms or investor tolerance toward leverage under certain market conditions. Therefore, while high leverage may be viewed as a risk factor, its direct impact on stock returns is inconclusive in this context.

5. Discussion

The analysis shows that the average Return on Equity (ROE) among Indian listed companies is 14.23%, with considerable variation, indicating differences in profitability and capital efficiency. The average Current Ratio of 1.87 suggests good liquidity, though variability points to diverse short-term financial strategies. The mean Debt-to-Equity (D/E) Ratio of 0.76 reflects moderate leverage, with some firms showing

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minimal debt and others heavily reliant on borrowing. Stock Returns average 18.94%, although the high standard deviation signals significant volatility, ranging from notable losses to strong gains.

Overall, the data reveal varied financial health and performance across firms. Return on Equity (ROE) is a critical indicator of a firm's profitability and efficient use of shareholder capital. Studies by Penman and Reggiani (2013) and Fama and French (1992) confirm that consistently high ROE is positively linked to stock returns, while variability in ROE reflects differences across sector, efficiency, and capital strategies (Nimalathasan, 2010). The Current Ratio, a key liquidity measure, signals a firm's ability to meet short-term obligations. Eljelly (2004) and Shin and Soenen (1998) note that both conservative and aggressive liquidity management approaches influence profitability and risk perception. The Debt-to-Equity (D/E) Ratio reflects financial leverage. Lower ratios suggest stability, whereas higher ratios may signal risk or growth potential. Modigliani and Miller (1963) highlighted the trade-off between tax benefits and bankruptcy risk, while Ramesh and Reddy (2020) noted industry-specific leverage patterns in India. Stock Returns, influenced by both firm-specific and external factors, often shows high variability. Jegadeesh and Titman (1993) and Lintner (1965) emphasized the roles of profitability, risk, and investor expectations in driving return volatility.

The correlation analysis reveals a strong positive relationship between ROE and Stock Returns ($r = 0.613$, $p < 0.01$), indicating that more profitable firms tend to yield higher returns, supporting previous research (Fama & French, 1992). A weaker but significant positive correlation exists between the Current Ratio and Stock Returns ($r = 0.212$, $p < 0.05$), suggesting that firms with better liquidity slightly outperform in the market. The Debt-to-Equity Ratio has a weak negative correlation with Stock Returns ($r = -0.173$), though it is not statistically significant, indicating leverage alone may not strongly influence stock performance. Among the independent variables, ROE and D/E Ratio are moderately and negatively correlated ($r = -0.321$, $p < 0.01$), implying that higher debt levels are associated with reduced profitability. Other inter-variable correlations, such as ROE–Current Ratio ($r = 0.196$) and Current Ratio–D/E Ratio ($r = -0.109$), are weak and statistically insignificant, suggesting limited linear associations between profitability, liquidity, and leverage within the sample.

Investors tend to value firms with high ROE, as it signals efficient use of equity and often leads to higher market valuations (Penman & Reggiani, 2013; Nimalathasan, 2010). Liquidity, measured by the Current Ratio, shows a weaker but positive effect on stock returns, reflecting its role in reducing financial distress and supporting stability (Eljelly, 2004; Shin & Soenen, 1998). The Debt-to-Equity Ratio exhibits a weak and insignificant negative relationship with stock returns, consistent with mixed findings on leverage's impact due to varying industry conditions (Modigliani & Miller, 1963; Ramesh & Reddy, 2020). The negative correlation between ROE and D/E Ratio suggests that higher debt levels may reduce profitability by increasing financial risk (Myers, 2001). Overall, profitability, liquidity, and leverage appear to influence firm performance somewhat independently, shaped by firms' strategic choices and sectoral factors.

Return on Equity (ROE) is the strongest and most significant predictor of stock returns, with each one-unit increase in ROE leading to an approximate 0.92% rise in stock returns ($p < 0.001$). This underscores ROE's key role in driving investor confidence and market performance. The Current Ratio also positively influences stock returns, with a one-unit increase associated with a 3.47% gain ($p = 0.025$), indicating liquidity's moderate but meaningful impact. Conversely, the Debt-to-Equity (D/E) Ratio shows a negative but statistically insignificant relationship with stock return, suggesting that while higher leverage may be linked to lower returns, its effect is inconclusive within this sample.

Penman and Reggiani (2013) and Nimalathasan (2010) highlight that firms with efficient equity use, reflected in high ROE, tend to achieve sustained market outperformance, supporting ROE's strong role as a stock return predictor across various markets. Liquidity, measured by the Current Ratio, also positively affects stock returns by reducing financial distress risk and promoting stability, as noted by Eljelly (2004) and Shin and Soenen (1998), though its impact is generally less significant than profitability. The Debt-to-Equity Ratio shows a negative but inconclusive relationship with stock returns, consistent with Modigliani and Miller's (1963) theory and findings by Ramesh and Reddy (2020), which suggest that leverage's effects vary by industry and market conditions, making its influence on stock prices uncertain.

While previous studies have established the significance of financial ratios—particularly profitability measures such as ROE in predicting stock returns (Ou & Penman, 1989; Fama & French, 1992),

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there remains inconsistency and limited exploration regarding the roles of liquidity and leverage ratios, especially within the Indian market. Earlier Indian studies (Sehgal & Tripathi, 2009; Sharma & Singh, 2011) show mixed evidence on how liquidity and solvency affect stock performance, and more recent analyses (Gupta & Jain, 2020) reaffirm the dominance of profitability ratios but provide inconclusive results on debt-related measures. Furthermore, these studies often rely on data prior to major recent disruptions such as the COVID-19 pandemic and the accelerated digital transformation impacting Indian markets. The evolving market environment, changing investor behaviors, and sector-specific variations call for updated, context-specific research using recent data to clarify the nuanced influence of liquidity and leverage on stock price performance in India.

6. Conclusion

This study concludes that among the selected financial ratios, ROE significantly influences stock returns in India. Liquidity (current ratio) has a moderate effect, while leverage (D/E) does not significantly predict returns. These insights are valuable for retail and institutional investors aiming to construct fundamentally sound portfolios.

The findings also show that investors should emphasize ROE when screening stocks for long-term investment decisions. Moreover, companies should balance their profitability and liquidity to enhance market perception. Further, the study highlights the need to include additional variable,such as EPS, and the P/E ratio ,as well as sector specific analysis , to provide more detailed and deeper insight.

The research also reveals that ROE has a strong and positive correlation with stock returns, underpinning profitability as key driver for market performance. The Current Ratio demonstrates a weak but positive association, indicating that liquidity plays a moderate role in investor confidence. Conversely, the Debt-to-Equity Ratio exhibits a negative yet statistically insignificant impact on stock returns, indicating that leverage's effect may vary depending on firm -specific or market conditions, as well as day-to-day business operation.

Finally, the findings of this research provide valuable insights to all the stakeholders, including academics and policymakers, by emphasizing the crucial inclusions of profitability and liquidity in shaping stock market outcomes in emerging economies such as India. The findings also contribute to understanding how financial ratios influence equity valuation, supporting more informed investment decisions and policy formulation.

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