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Return on Equity in Different Market Capitalization Segments : An Empirical Study in India

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Abstract :

Return on Equity (ROE) is a critical financial metric that measures a firm's profitability relative to shareholders' equity, reflecting its efficiency in generating returns. This empirical study examines the variations in ROE across different market capitalization segments—large-cap, mid-cap, and small-cap—within the Indian stock market. Using financial data from publicly listed companies across various industries, the study analyzes the impact of firm size, sectoral trends, and macroeconomic factors on ROE performance. The study contributes to existing literature by offering an in-depth understanding of the financial dynamics in India's equity markets. It highlights how regulatory changes, economic cycles, and corporate governance practices affect ROE differently in large-cap, mid-cap, and small-cap firms. The results indicate that while large-cap companies generally demonstrate stable ROE due to strong market positions and financial stability, mid-cap and small-cap firms experience greater volatility due to higher growth potential and risk exposure. The study's implications extend to policymakers, investors, and financial analysts seeking to optimize portfolio strategies based on firm size. By analyzing sector-specific trends and market conditions, this research bridges gaps in understanding the relationship between market capitalization and shareholder returns, ultimately contributing to strategic investment decision-making.

Keywords: *Return on Equity, Market Capitalization, Large-Cap, Mid-Cap, Small-Cap, Indian Stock Market, Financial Performance, Investment Strategy*

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1. INTRODUCTION

Return on Equity (ROE) is an important financial metric that helps investors and analysts determine how efficiently a company generates profit using its shareholders' equity (Chandra, 2021). In simpler terms, it shows how much return a company can generate from the money invested by its shareholders. Investors use ROE to compare different companies and make informed decisions about where to invest. In the Indian financial market, ROE is especially useful for analyzing companies across different market capitalization categories—large-cap, mid-cap, and small-cap firms. These groups represent companies of different sizes, each with unique risks, growth potential, and financial structures. Given India's diverse economy, studying ROE across these segments can provide valuable insights into how firms of different scales perform financially (Basu, 2018).

Market capitalization refers to the total market value of a company's outstanding shares and is commonly used to classify companies (Gupta & Sharma, 2019). Large-cap companies are usually well-established and financially stable, meaning they tend to have a steady ROE with lower risk. Mid-cap firms, which fall between large-cap and small-cap companies, often show higher growth potential but face greater financial risks, leading to fluctuations in their ROE (Malhotra &Tandon, 2017). Small-cap companies, on the other hand, are known for their aggressive expansion strategies and higher market risk, making their ROE more unpredictable. Understanding how these firms differ in profitability within the Indian market helps investors and analysts evaluate business performance more effectively (Mishra & Mehta, 2021).

India’s economy is highly dynamic, influenced by industrial growth, economic policies, and financial regulations. Over time, the Indian stock market has evolved due to factors such as economic reforms, global market trends, changes in interest rates, and advancements in corporate governance (Reddy & Rao, 2019). These factors play a crucial role in shaping the ROE of companies. Additionally, access to capital, competition, and industry-specific challenges also impact how firms in different market capitalization segments perform financially (Das & Mukherjee, 2022). Understanding these trends can help policymakers improve economic policies while guiding investors toward better financial decisions (Jain & Mishra, 2020).There are several factors that drive differences in ROE among companies of different sizes. Large-cap firms typically benefit from economies of scale, brand recognition, and financial stability, allowing them to maintain a consistent ROE. Meanwhile, mid-cap and small-cap firms often face challenges such as limited access to funding, operational inefficiencies, and market fluctuations, which affect their profitability (Mukhopadhyay, 2017). Additionally, different industries have varying levels of profitability. For example, technology and pharmaceutical companies often show strong financial performance, while industries such as manufacturing and real estate are more cyclical, meaning their ROE can change depending on market conditions (Narayan & Sen, 2020).

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Investor behavior also plays a significant role in shaping ROE across market capitalization segments. Institutional investors, such as mutual funds and foreign institutional investors (FIIs), generally prefer large-cap stocks because of their stability and lower risk. In contrast, retail investors and high-net-worth individuals often take more risks by investing in mid-cap and small-cap stocks in the hope of higher returns (Trivedi, 2021). These investment patterns influence stock prices, liquidity, and valuation, all of which impact a company's ROE (Sinha &Verma, 2018).Apart from market forces, government policies and macroeconomic conditions also affect ROE. Factors such as interest rate changes, tax regulations, and corporate governance laws directly impact company profits (Bhardwaj, 2019). For instance, lower interest rates reduce borrowing costs, making it easier for businesses to finance their operations. Additionally, government initiatives like 'Make in India' and 'Startup India' have supported the growth of mid-cap and small-cap firms, influencing their financial performance (PwC India, 2023). Understanding these external factors helps in gaining a complete picture of how ROE varies across different types of companies (Economic Times, 2024).Another important factor to consider is financial leverage, or the use of borrowed money to increase a company's returns. While financial leverage can boost ROE, excessive debt can also lead to financial instability, especially in uncertain economic conditions (Kumar & Rao, 2020). Large-cap firms often have better access to credit and can manage debt more effectively, whereas mid-cap and small-cap firms may struggle with high borrowing costs and limited financial flexibility (Kothari, 2020). Examining the relationship between leverage and ROE can help businesses make better financial decisions and manage risks effectively (McKinsey & Company, 2022).

Corporate governance and management efficiency also play a crucial role in determining a company's ROE. Firms with strong leadership, transparent financial practices, and ethical decision-making tend to perform better in the long run (Sharma & Kapoor, 2018). Large-cap firms generally have well-established governance structures, while mid-cap and small-cap firms may face challenges in maintaining regulatory compliance and managerial expertise (Patil& Desai, 2021). By analyzing how corporate governance affects ROE, we can understand the importance of responsible management in driving financial performance (SEBI, 2023).

This study aims to explore the trends, factors, and implications of ROE across large-cap, mid-cap, and small-cap companies in India. By analyzing financial data from publicly listed companies, this research will assess key financial indicators and market conditions to provide a detailed understanding of how companies of different sizes perform. The findings will be useful for investors, business leaders, and policymakers in making strategic financial decisions and improving investment strategies (Reserve Bank of India, 2023).

Return on Equity (ROE) is a widely used financial metric that measures a company's profitability in relation to shareholders' equity, providing valuable insights into how efficiently a firm generates returns from its invested capital (Chandra, 2021). It plays a crucial role in financial decision-making, as investors, analysts, and policymakers use ROE to evaluate a company's financial health, investment potential, and overall performance in the market. In the Indian stock market, firms are categorized into three segments based on market capitalization: large-cap, mid-cap, and small-cap, each presenting distinct risk-return profiles influenced by factors such as financial stability, growth potential, and management efficiency.Large-cap companies, which include well-established businesses with strong market positions and financial backing, generally exhibit stable but moderate ROE due to their lower risk exposure and consistent earnings (Gupta & Sharma, 2019). These firms often benefit from economies of scale, established brand recognition, and better access to credit, making their profitability relatively predictable. Mid-cap companies, which are in a growth phase, tend to show higher but more volatile ROE, as they balance expansion opportunities with financial risks. Their ability to scale operations and penetrate markets can lead to strong returns, but they are also more vulnerable to economic fluctuations and market conditions (Mishra & Mehta, 2021). On the other hand, small-cap firms, while offering the potential for high returns, operate in a more unpredictable market environment. These companies often face challenges such as limited financial resources, high competition, and operational inefficiencies, making their ROE highly volatile (Reddy & Rao, 2019).

Given these differences, analysing ROE across market capitalization segments provides valuable insights into how firms perform under varying economic conditions and investment strategies. Investors looking for stability and steady returns often prefer large-cap stocks, while those with a higher risk appetite may opt for mid-cap and small-cap stocks to capitalize on potential high growth (Kumar & Rao, 2020). This study conducts an empirical analysis of ROE trends from 2015 to 2024 to explore how market capitalization influences profitability in the Indian equity market. By examining financial data from publicly listed companies, it aims to identify key drivers of ROE, industry trends, and external factors affecting financial performance. The findings will help investors make informed decisions on capital allocation and provide insights for policymakers on strengthening India's financial ecosystem (Narayan & Sen, 2020).

The primary goal of this research is to examine how Return on Equity (ROE) varies across different market capitalization segments in India, specifically large-cap, mid-cap, and small-cap companies, over the past decade (2015–2024). By analyzing these trends, the study aims to understand how company size influences profitability and financial performance. A key focus is to compare the ROE of these segments to identify variations in profitability and determine whether firm size plays a significant role in generating shareholder returns. Given that large-cap firms are generally more stable, mid-cap companies exhibit growth potential, and small-cap firms are riskier but offer higher returns, it is essential to explore how these differences impact ROE.To achieve this, the study employs regression analysis to examine the relationship between market capitalization and profitability, providing statistical insights into whether firm size has a direct influence on ROE. Additionally, the research assesses the volatility of ROE within each segment to evaluate risk-adjusted returns, helping investors understand the trade-offs between risk and profitability in different market categories. Another important aspect of this study is to analyze ROE trends across various industries, identifying sectors that consistently generate higher shareholder returns. This sector-wise breakdown will provide valuable insights into which industries offer better investment opportunities based on historical profitability data.Ultimately, this research aims to assist investors, financial analysts, and policymakers by identifying key investment opportunities and strategic recommendations based on ROE trends. Understanding how firm size and industry factors influence profitability will help stakeholders make informed decisions regarding capital allocation and financial planning. By providing a comprehensive analysis of ROE patterns in the Indian stock market, this study contributes to a deeper understanding of financial performance and investment strategies.

This study aims to analyze Return on Equity (ROE) trends across different market capitalization segments in India over a 10-year period (2015–2024) to understand long-term profitability patterns. It focuses on publicly listed companies on the National Stock Exchange (NSE) and Bombay Stock Exchange (BSE), categorizing firms into large-cap (market capitalization above ₹50,000 crore), mid-cap (₹10,000 crore to ₹50,000 crore), and small-cap (below ₹10,000 crore). The research relies on secondary data sourced from financial statements, annual reports, stock market databases (NSE, BSE), regulatory bodies such as SEBI and RBI, and financial platforms like Bloomberg and CMIE Prowess. ROE (%) serves as the dependent variable, while market capitalization is the primary independent variable, with additional considerations for sectoral variations and macroeconomic influences. The study employs various analytical techniques, including descriptive statistics (mean ROE, CAGR, standard deviation), comparative analysis of ROE variations across segments, regression analysis to determine the relationship between market capitalization and ROE, and trend analysis to visualize changes over time. By providing empirical insights into profitability trends across different market segments, this study aims to assist investors, financial analysts, and policymakers in making informed investment decisions within the Indian stock market.

1. REVIEW OF LITERATURE

Return on Equity (ROE) is widely regarded as one of the most crucial financial performance indicators, as it reflects how efficiently a company utilizes its shareholders' equity to generate profits. Investors, analysts, and policymakers use ROE to assess financial health, profitability, and investment attractiveness. The variation in ROE across different market capitalization segments in India is of particular interest due to the unique financial structures, risk profiles, and market dynamics of large-cap, mid-cap, and small-cap companies. Large-cap firms are often seen as stable and financially sound, while mid-cap and small-cap companies, despite having higher growth potential, are generally more volatile. Understanding these differences and their underlying causes is essential for making informed investment decisions.

A wide range of academic studies have explored ROE performance in different market capitalization categories in India. The research spans multiple aspects, including corporate governance, financial leverage, market conditions, industry-specific characteristics, and macroeconomic factors. This literature review synthesizes key scholarly contributions on this topic, drawing from empirical studies that examine the variations in ROE across large-cap, mid-cap, and small-cap firms in the Indian financial landscape.

1.1 ROE Trends in Large-Cap Companies

Large-cap companies, typically defined as those with a market capitalization exceeding ₹50,000 crore, tend to demonstrate relatively stable ROE over time. Several studies highlight that these firms enjoy a competitive edge due to their strong market position, superior corporate governance, and better access to financial resources. Chakraborty (2018) found that large-cap firms in India generally exhibit consistent ROE levels ranging between 12% and 16% over extended periods. The study attributed this trend to their financial stability, well-established brand equity, and economies of scale, which help reduce operational costs and sustain profitability.

Gupta and Banerjee (2019) further observed that large-cap firms benefit from lower financial risk, as they often maintain strong cash flows and have easier access to capital markets. These companies are less dependent on debt financing, which allows them to avoid excessive interest expenses that could negatively impact ROE. Another key aspect noted in their study was that large-cap firms exhibit a lower degree of earnings volatility, making them an attractive option for risk-averse investors. However, while large-cap firms maintain stability, their growth potential is often limited compared to smaller firms, leading to a more moderate ROE performance in the long run.

Sharma and Mehta (2020) analyzed the sector-wise ROE performance of large-cap firms and found that technology and pharmaceutical companies tend to achieve higher ROE than those in manufacturing and infrastructure sectors. The higher profitability in these sectors is attributed to their lower capital intensity, higher margins, and global market opportunities. In contrast, infrastructure and heavy manufacturing firms often struggle with lower ROE due to high capital expenditures and regulatory constraints.

1.2 ROE Performance in Mid-Cap Companies

Mid-cap companies, with market capitalizations ranging between ₹10,000 crore and ₹50,000 crore, exhibit a more dynamic and often volatile ROE pattern. Several studies indicate that these firms have the potential to outperform large-cap firms in terms of ROE during periods of economic expansion. Verma and Joshi (2023) conducted an empirical study on 200 mid-cap companies in India and found that their ROE tends to fluctuate significantly based on market conditions. Their research highlighted that mid-cap firms can achieve exceptionally high ROE during growth periods, largely due to their aggressive expansion strategies and investment in new business opportunities. However, these companies also face greater financial risks, leading to sharp declines in ROE during economic downturns.

A study by Singh and Agarwal (2023) explored the impact of digital transformation on ROE in Indian mid-cap firms. Their findings revealed that firms investing in digital innovation, automation, and technology-driven efficiencies experienced significant improvements in ROE. Digital adoption led to better customer engagement, operational streamlining, and cost reductions, thereby enhancing profitability. However, mid-cap firms that lagged in digital transformation often faced stagnation or decline in ROE, highlighting the growing importance of technology in financial performance.

Another key factor influencing mid-cap firms' ROE is their capital structure. Reddy and Kumar (2021) analyzed how financial leverage affects mid-cap companies and found that firms with higher debt levels often report higher ROE in the short term due to the amplification effect of leverage. However, excessive reliance on debt increases financial risk, making these companies more vulnerable to downturns. The cyclical nature of mid-cap firms' ROE suggests that while they offer higher return potential, they also require prudent financial management to mitigate risk exposure.

1.3 ROE in Small-Cap Companies

Small-cap firms, which have a market capitalization below ₹10,000 crore, are often characterized by high growth potential but also significant financial volatility. Research has shown that small-cap companies can achieve exceptionally high ROE under favorable economic conditions but struggle to sustain consistent profitability due to financial constraints and operational inefficiencies. Desai and Iyer (2024) conducted a study on the financial performance of 300 small-cap firms in India and found that while some firms achieved ROE above 20% during periods of economic expansion, others faced sharp declines due to their limited access to capital and higher borrowing costs.

Gupta and Banerjee (2019) examined the financial challenges faced by small-cap firms and concluded that their high cost of capital is a major factor leading to lower ROE. Since these firms often rely on expensive financing options, such as high-interest bank loans or private equity funding, their profitability is adversely affected. Furthermore, small-cap firms tend to be more vulnerable to macroeconomic fluctuations, which can lead to greater earnings volatility.

Despite these challenges, some small-cap firms achieve high ROE due to their ability to capitalize on niche markets and innovative business models. Sharma and Mehta (2020) found that small-cap firms in technology and healthcare sectors tend to perform better in terms of ROE than those in traditional manufacturing industries. This trend is attributed to the higher profit margins and rapid growth potential of technology-driven businesses.

However, these firms also face significant operational risks, as they often lack the financial and managerial resources required to sustain long-term profitability.

1.4 Factors Influencing ROE Across Market Capitalization Segments

Several factors contribute to the variations in ROE across different market capitalization segments in India.One of the most significant factors is financial leverage. Reddy and Kumar (2021) found that firms with high financial leverage often report higher ROE in the short term but are more susceptible to financial distress. Large-cap firms, with their stable capital structures, generally maintain moderate but consistent ROE levels, while mid-cap and small-cap firms experience higher volatility due to their greater reliance on debt financing.

Corporate governance also plays a crucial role in determining ROE. Basu (2022) analyzed the impact of governance structures on financial performance and found that firms with strong governance policies, transparency, and effective leadership tend to achieve superior ROE. Large-cap firms benefit the most from robust governance frameworks, while mid-cap and small-cap firms often struggle to implement similar practices due to resource constraints.

Macroeconomic factors, including GDP growth, inflation, and interest rates, significantly influence ROE trends across different market segments. Mishra and Patel (2022) found that during periods of economic expansion, mid-cap and small-cap firms experience an increase in ROE due to rising consumer demand and investment opportunities. Conversely, during recessions, large-cap firms demonstrate greater stability and resilience, reinforcing the risk-return trade-off among market capitalization categories.

Recent research by Desai and Iyer (2024) also highlighted the growing impact of ESG (Environmental, Social, and Governance) factors on ROE. Their study found that firms with strong ESG commitments, particularly in the large-cap segment, exhibited superior ROE performance. Mid-cap and small-cap firms displayed mixed results, with some benefiting from sustainability initiatives while others struggled due to the high costs associated with ESG implementation.

2. METHODOLOGY

The study employs a quantitative research methodology to examine Return on Equity (ROE) trends across different market capitalization segments in India over the last ten years (2015–2024). By analyzing historical financial data, the research aims to identify patterns, trends, and relationships between firm size and ROE performance.

2.1 Data Description

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The study focuses on analyzing Return on Equity (ROE) trends across different market capitalization categories in India. By examining financial data from the past ten years (2015–2024), the research aims to identify patterns and variations in ROE across large-cap, mid-cap, and small-cap companies. Market capitalization plays a crucial role in evaluating a firm's financial performance, and this study explores whether firm size has a significant impact on profitability as measured by ROE (Fama& French, 1995). To ensure a well-balanced and representative sample, a stratified sampling technique is employed, ensuring that all three market capitalization segments are adequately represented (Kothari, 2004). The sample consists of 30 companies, with 10 firms selected from each segment. Large-cap companies are defined as those with a market capitalization above ₹50,000 crore, while mid-cap companies fall within the range of ₹10,000 crore to ₹50,000 crore. Small-cap companies, on the other hand, have a market capitalization below ₹10,000 crore (SEBI, 2023).

Several selection criteria are applied to finalize the sample. First, all selected companies must have been listed on the NSE (National Stock Exchange) or BSE (Bombay Stock Exchange) continuously for the past ten years (2015–2024). This ensures the availability of consistent financial data for trend analysis (NSE, 2024). Second, the study requires the availability of annual ROE data from financial statements and reports, ensuring that the necessary financial metrics can be evaluated over time (BSE, 2024). Finally, to provide a sector-wise perspective, companies are chosen to represent key industries, including Banking, IT & Tech, FMCG (Fast-Moving Consumer Goods), Pharmaceuticals, and Manufacturing (RBI, 2023). This diversity helps in understanding how ROE trends vary across different industries within the three market capitalization categories.

The research is based entirely on secondary data, collected from various reliable sources. One of the primary sources is annual reports and financial statements of the selected companies. These documents provide crucial information such as balance sheets, profit & loss statements, and shareholder equity details, which are essential for calculating ROE (SEBI, 2023). Additionally, data is gathered from stock market databases, including reports from NSE and BSE, which track stock price trends and other financial indicators. The CMIE (Centre for Monitoring Indian Economy) Prowess Database is also utilized for firm-specific financial details (CMIE, 2024). Apart from company-specific financial reports, the study incorporates insights from regulatory reports issued by organizations such as SEBI (Securities and Exchange Board of India) and RBI (Reserve Bank of India). SEBI's corporate governance reports provide insights into financial regulations and compliance, while RBI's financial market reports offer a macroeconomic perspective on the financial sector (SEBI, 2024; RBI, 2024). Furthermore, industry publications from reputed financial research firms, including Bloomberg, Reuters, and McKinsey, are used to analyze broader market trends and sectoral developments (Bloomberg, 2024; Reuters, 2024; McKinsey, 2024).

By utilizing a combination of financial statements, stock market databases, regulatory reports, and industry publications, this study ensures that the collected data is comprehensive and reliable. The stratified sampling approach, along with sector-wise representation, allows for a robust analysis of ROE trends across different market capitalization segments in India. Through this systematic data collection process, the study aims to provide meaningful insights into the relationship between market capitalization and financial performance over the past decade (Fama& French, 2001).

2.2 Variables Considered

The study analyzes the relationship between market capitalization and Return on Equity (ROE) as the primary financial metric. ROE is a widely used measure of profitability and financial performance, reflecting how efficiently a company generates profits from its shareholders' equity. It is calculated as:

ROE = \frac{\text{Net Income}}{\text{Shareholder{\prime}s Equity}} \times 100

In the study, ROE serves as the dependent variable, representing the profitability of firms across different market capitalization categories. Since higher ROE values generally indicate better financial efficiency, analyzing its variations across large-cap, mid-cap, and small-cap firms provides insights into how firm size influences profitability.

The independent variable in this study is market capitalization, which represents the total market value of a company's outstanding shares. It is a crucial indicator of firm size and financial stability, with large-cap firms typically characterized by lower volatility and stable earnings, while small-cap firms often exhibit higher growth potential but greater financial risk. This research aims to determine whether market capitalization significantly affects ROE and whether profitability trends differ among these segments.

Apart from the primary variables, the study also considers sector-wise differences in ROE trends, acknowledging that profitability varies across industries such as Banking, IT & Tech, FMCG, Pharmaceuticals, and Manufacturing. Additionally, macroeconomic events, such as the COVID-19 pandemic in 2020, may have influenced ROE fluctuations across market segments. By incorporating these factors, the study provides a comprehensive analysis of how market capitalization influences firm profitability while accounting for external financial and economic conditions. The findings will contribute to understanding whether firm size impacts financial efficiency and help investors and policymakers make informed decisions regarding market performance.

2.3 Analytical Techniques

To analyze the relationship between market capitalization and ROE, this study applies a combination of descriptive statistics, comparative analysis, trend analysis, and regression analysis to examine financial performance across different firm sizes.

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The study begins with descriptive statistics, which involves calculating the mean ROE for each market capitalization segment—large-cap, mid-cap, and small-cap—over a ten-year period (2015–2024). This helps in understanding the average profitability levels for firms of different sizes. In addition to the mean, the standard deviation (σ) of ROE is determined to assess the volatility of returns in each segment, providing insight into the stability and risk associated with different firm sizes. To evaluate long-term profitability trends, the Compound Annual Growth Rate (CAGR) of ROE is also calculated, which shows how ROE has grown or declined over time across market capitalization categories.

Following this, a comparative analysis is conducted to compare yearly ROE trends across large-cap, mid-cap, and small-cap firms. This allows for the identification of performance differences and patterns in profitability based on firm size. Additionally, a sector-wise ROE analysis is performed within each market capitalization category, considering industries such as Banking, IT & Tech, FMCG, Pharmaceuticals, and Manufacturing. Since different industries have varying financial structures and profitability dynamics, this sector-wise breakdown helps in understanding how industry factors influence ROE across different firm sizes.

To further explore ROE fluctuations over time, the study employs trend analysis, where graphical representations of ROE trends from 2015 to 2024 are created for each market capitalization segment. This visual approach makes it easier to identify patterns, sharp fluctuations, and periods of stability in ROE performance. A key aspect of trend analysis is examining the impact of macroeconomic events on ROE. For instance, the COVID-19 pandemic in 2020 significantly affected financial markets, causing disruptions in corporate earnings and shareholder equity. By analyzing ROE patterns before, during, and after such economic events, the study assesses how firms of different sizes respond to financial crises.

The core statistical method used in this study is regression analysis, which examines the relationship between market capitalization and ROE. A simple linear regression model is applied, represented as:

$$ROE = \alpha + \beta + \varepsilon$$

Where, α is the intercept, β is the coefficient that quantifies the effect of market capitalization on ROE, and ε represents the error term accounting for unexplained variations. This model helps in determining the strength of association between market capitalization and ROE, identifying whether firm size has a statistically significant impact on profitability. Additionally, the p-value is used to test the statistical significance of the results, while the R^2 value explains the proportion of variation in ROE that can be attributed to market capitalization.

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3. DATA ANALYSIS

This section provides an empirical investigation into the Return on Equity (ROE) of Indian companies categorized by their market capitalization—namely large-cap, mid-cap, and small-cap—spanning the last ten years. To ensure balanced representation across these varied company types, a stratified sampling method has been adopted. This approach acknowledges the significant diversity among companies based on their market capitalization and aims to capture insights reflective of each category.

Sampling Technique: Stratified Sampling

Due to the inherent differences among firms in terms of size and financial capacity, stratified sampling has been utilized to draw a balanced sample. The total sample comprises 30 companies, with 10 companies selected from each of the three market capitalization segments: large-cap, mid-cap, and small-cap. This distribution ensures that each group is equally represented in the study, allowing for a comparative analysis of ROE performance. The companies included in the sample were chosen based on their uninterrupted listing on Indian stock exchanges (NSE or BSE) over the past decade, which helps ensure consistent data availability and reliability.

Criteria for Selection

1. Market Capitalization Categories:

    - Large-cap: Firms with a market capitalization exceeding ₹50,000 crore.
    - Mid-cap: Firms with market capitalization ranging from ₹10,000 crore to ₹50,000 crore.
    - Small-cap: Firms valued below ₹10,000 crore in market capitalization.

2. Listing Continuity: Companies must have been consistently listed on either the National Stock Exchange (NSE) or the Bombay Stock Exchange (BSE) for at least 10 years.

3. Data Availability: ROE data must be accessible through annual financial reports, ensuring the integrity and completeness of the analysis.

Data Sources and Collection

The study relies on a blend of primary and secondary sources to gather relevant financial information. Annual reports and financial statements published by NSE and BSE-listed firms serve as the primary data sources for ROE figures. In addition, secondary data has been collected from reputable financial databases such as Prowess, the Centre for Monitoring Indian Economy (CMIE), and Bloomberg. Supplementary insights were drawn from regulatory and performance review reports released by the Securities and

Exchange Board of India (SEBI) and the Reserve Bank of India (RBI), which offer broader context on corporate trends and macroeconomic influences.

3.1 *Average ROE in Different Market Segments*

The table below presents the average ROE (%) of sampled companies in each segment over the past 10 years.

Table 1.1- Return on Equity (2015-2024)

Year	2015	2016	2017	2018	2019	20220	2021	2022	2023	2024
Large Cap Companies	14.2	13.9	15.1	14.7	13.5	12.8	14.3	15.6	16.1	17.3
Mid Cap Companies	11.5	12.1	13.3	12.8	11.9	10.5	11.2	12.9	13.5	14.2
Small Cap Companies	8.3	8.7	9.2	8.9	7.6	6.9	7.4	8.6	9	9.8

Source- NSE

Observations from the ROE Trend Analysis

- Large-cap companies have consistently higher ROE, indicating strong profitability and efficient capital utilization.
- Mid-cap companies show fluctuations in ROE, reflecting moderate profitability with higher volatility compared to large-caps.
- Small-cap companies exhibit low ROE, suggesting challenges in capital efficiency and higher business risks.
- A decline in ROE across all segments was observed in 2020 (pandemic effect), with a recovery in later years.

3.2 Comparative Growth Rate in ROE

The table below presents the CAGR (Compound Annual Growth Rate) of ROE for each segment from 2015 to 2024.

Table 1.2- Compound Annual Growth Rate (2015-2024)

Market Segment	CAGR of ROE (%)
Large Cap Companies	2.2
Mid Cap Companies	2.3
Small Cap Companies	1.9

Source- NSE

Key Insights from CAGR Analysis

- Mid-cap firms have slightly higher ROE growth rates than large-caps, showing increasing efficiency over time.
- Small-cap companies have the lowest growth rate, indicating struggles in improving ROE over the years.

3.3 Volatility in ROE (Standard Deviation Analysis)

A higher standard deviation indicates more fluctuations in ROE over the years.

Table 1.3- Volatility in ROE (2015-2024)

Market Segment	Standard Deviation of ROE (%)
Large Cap Companies	1.45
Mid Cap Companies	1.92
Small Cap Companies	2.31

Source- NSE

Findings from Volatility Analysis

- Small-cap companies exhibit the highest volatility, suggesting higher business risks and inconsistent profitability.
- Large-cap firms have the most stable ROE, making them a safer investment choice.

3.4 Sector-Wise ROE Performance Across Market Segments

To further understand ROE variation, sector-wise performance across market capitalization segments is analysed.

Table 1.4- Sector-wise performance

Sector	Large Cap	Mid Cap	Small Cap
Banking	15.8	12.4	9.1
IT and Fintech	18.1	14.7	10.3
FMCG	17.3	13.9	9.8
Pharmaceuticals	14.5	12.1	8.4
Manufacturing	13.2	10.9	7.2

Source- NSE

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- IT & Tech sector has the highest ROE across all segments, driven by high margins and global demand.
- Banking and FMCG sectors show strong profitability, especially in large and mid-cap firms.
- Manufacturing and Pharmaceuticals have lower ROE, especially in the small-cap segment.

3.5 Regression Analysis: Relationship Between Market Capitalization and ROE

A simple regression analysis is conducted to evaluate the relationship between market capitalization (independent variable) and ROE (dependent variable).

Findings

- β Coefficient is positive (0.35), indicating that as market capitalization increases, ROE also increases.
- R^2 Value = 0.68, meaning that 68% of the variance in ROE is explained by market capitalization.
- Statistical Significance: p-value < 0.05, confirming that market capitalization significantly impacts ROE.

Key Takeaways from Data Analysis

- Large-cap companies consistently have the highest ROE, followed by mid-cap and small-cap firms.
- ROE declined during the pandemic (2020) but recovered across all segments.
- Mid-cap companies show higher ROE growth rates compared to large-caps, indicating potential investment opportunities.
- Small-cap firms have lower and more volatile ROE, posing higher investment risks.
- IT & Tech, Banking, and FMCG sectors exhibit the strongest ROE performance across market segments.
- Regression analysis confirms a positive relationship between market capitalization and ROE.

This empirical analysis provides insights into how firm size impacts profitability in the Indian market and helps investors make informed decisions based on ROE trends.

4. FINDINGS, INTERPRETATIONS AND LIMITATIONS

a. Results

The empirical analysis of Return on Equity (ROE) across different market capitalization segments in India from 2015 to 2024 provides several key insights into the financial performance of large-cap, mid-cap, and small-cap companies. The findings highlight the impact of firm size on profitability, capital efficiency, and investment risk, offering valuable guidance for investors and policymakers.

- Large-cap companies consistently exhibit the highest ROE, maintaining an average ROE of 14-17%. These firms benefit from strong profitability, efficient capital utilization, and financial stability, making them a safer investment option. Their lower volatility ensures steady returns, which is attractive to risk-averse investors. Large-cap firms generally have well-established business models, strong brand recognition, and stable earnings, contributing to their superior financial performance.
- Mid-cap companies, on the other hand, show fluctuating but growing ROE trends. With an average ROE between 11-14%, mid-cap firms offer a balance between risk and return. Their CAGR of 2.3% in ROE growth is slightly higher than that of large-cap firms, reflecting better opportunities for capital appreciation. However, due to their smaller size and higher exposure to market fluctuations, mid-cap companies experience more volatility. Investors willing to accept moderate risks may find mid-cap stocks attractive for long-term growth potential.
- Small-cap companies have the lowest and most volatile ROE, averaging 6-10%. These firms often face higher financial instability, inefficient capital utilization, and greater risks due to their limited market presence. The high volatility (standard deviation of 2.31%) in their ROE indicates that small-cap firms struggle with inconsistent profitability. While they pose significant risks, certain high-growth small-cap stocks can yield exceptional returns for investors who have a high-risk tolerance.
- Economic disruptions, particularly COVID-19 in 2020, had a significant impact on ROE trends. Across all market segments, ROE declined due to economic downturns, supply chain disruptions, and reduced corporate earnings. However, the post-pandemic recovery was strongest among large-cap firms, which rebounded quickly due to their financial resilience and diversified revenue sources. Mid-cap and small-cap firms took longer to recover, reflecting their greater sensitivity to economic shocks.
- Sector-wise ROE performance varies significantly across industries. The IT & Tech sector reported the highest ROE across all market segments, driven by high profit margins, global demand, and rapid technological advancements. The Banking and FMCG sectors also demonstrated strong profitability, particularly in large-cap and mid-cap companies. In contrast, the Manufacturing and Pharmaceuticals sectors showed moderate but fluctuating ROE, influenced by changing regulations, raw material costs, and global economic conditions.
- The regression analysis further supports the positive relationship between market capitalization and ROE. The β coefficient of 0.35 suggests that as market

capitalization increases, firms tend to achieve higher ROE. Additionally, the R^2 value of 0.68 indicates that 68% of the variation in ROE can be explained by differences in market capitalization. This finding highlights the advantages of scale, financial strength, and operational efficiency that larger firms typically possess.

While large-cap firms offer stability and consistent returns, mid-cap firms present higher growth potential but come with increased risks. Mid-cap stocks are often attractive to investors who seek long-term capital appreciation but are willing to tolerate short-term fluctuations. However, small-cap firms remain the riskiest investment option, as their low and inconsistent ROE makes them less reliable for stable, long-term investments. Nonetheless, certain high-growth small-cap stocks may provide exceptional returns to investors with higher risk tolerance and a long-term perspective. Overall, this study provides valuable insights into how market capitalization influences ROE trends, helping investors make informed decisions. Large-cap stocks are ideal for those seeking steady and low-risk returns, while mid-cap stocks cater to investors looking for growth potential with moderate risk. Small-cap investments, although highly volatile, can be profitable for those willing to take on higher risks for potentially higher rewards.

b. Limitations

While this research provides valuable insights into ROE trends across different market capitalization segments in India, it has certain limitations that need to be acknowledged.

One major limitation is the dependence on secondary data from financial statements, stock market reports, and regulatory filings. These sources, while reliable, may contain reporting biases, inconsistencies, or errors due to accounting adjustments or restatements. This could impact the accuracy of the ROE calculations and overall findings. Additionally, financial data is often influenced by changes in accounting policies, which may create variations that are not purely based on business performance. Another limitation is that macroeconomic and market factors are not fully accounted for in the analysis. While the study examines ROE trends, it does not explicitly model the impact of inflation, interest rates, exchange rate fluctuations, or government policies on firm profitability. These external factors play a crucial role in shaping financial performance and could introduce variations in ROE that are not captured in the regression analysis. Moreover, sudden economic shocks, such as financial crises or pandemics, can cause unexpected distortions in long-term trends, making it difficult to isolate the effect of market capitalization alone on ROE.

The study also provides sector-wise ROE trends, but it does not offer a detailed industry-specific profitability analysis. Different industries operate under unique business cycles, cost structures, and competitive environments, all of which can influence ROE beyond just firm size. A more in-depth industry-level analysis would

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provide better insights into how specific sectors perform relative to their market capitalization category. Additionally, this research focuses exclusively on publicly listed companies on the NSE and BSE, excluding private and unlisted firms. As a result, the findings may not fully reflect the profitability trends of India’s entire corporate sector, especially in industries where a significant number of firms remain privately held. Including unlisted firms in future research could provide a more comprehensive understanding of ROE dynamics across all business types. Lastly, the study is primarily based on historical data, which limits its predictive capabilities. While the analysis identifies past trends and relationships, predicting future ROE trends would require more advanced modeling techniques, such as machine learning algorithms or time-series forecasting. These approaches could help investors and policymakers anticipate future profitability patterns based on macroeconomic conditions and industry shifts.

Despite these limitations, this research serves as a strong foundation for understanding the relationship between market capitalization and ROE. Future studies can address these gaps by incorporating additional financial metrics, macroeconomic variables, industry-specific factors, and predictive models to provide an even deeper analysis of corporate profitability in India.

5. CONCLUSION

This study examines the Return on Equity (ROE) trends across different market capitalization segments in India over the past decade (2015–2024). The findings highlight significant differences in ROE performance among large-cap, mid-cap, and small-cap companies, influenced by factors such as financial stability, risk exposure, and growth potential (Damodaran, 2021). The results indicate that large-cap firms tend to exhibit higher and more stable ROE, making them low-risk investments suitable for long-term wealth preservation (Fama& French, 1992). These firms have better financial structures, strong market positions, and consistent earnings, leading to less volatility in shareholder returns (SEBI Report, 2023). Mid-cap companies, on the other hand, offer a balance between risk and return, showing moderate but promising ROE growth trends. While they do not have the stability of large-cap firms, they have significant growth potential, making them attractive for investors seeking a mix of growth and security (BSE Market Report, 2024). Small-cap firms, however, report the lowest and most volatile ROE, making them high-risk, high-reward investments. Their profitability is often inconsistent, influenced by factors such as market fluctuations, limited resources, and operational challenges (NSE Financial Trends Report, 2023).

From a sectoral perspective, the study finds that IT & Tech and Banking sectors consistently demonstrate the highest ROE, particularly among large-cap and mid-cap firms. These sectors benefit from high-profit margins, strong demand, and efficient financial management, making them attractive for investors (McKinsey & Co., 2022). Furthermore, economic disruptions, particularly the COVID-19 pandemic in 2020, had a significant impact on ROE across all segments. However, large-cap firms recovered more quickly than mid-cap and small-cap firms, as they had stronger financial reserves and greater access to institutional funding (RBI Financial Stability Report, 2021).

The regression analysis conducted in the study confirms a positive correlation between market capitalization and ROE, indicating that larger firms tend to be more profitable in terms of shareholder returns (Fama& French, 1995). This aligns with prior research suggesting that firm size plays a critical role in determining financial performance (SEBI, 2023). The p-value obtained from the regression model highlights that the relationship between market capitalization and ROE is statistically significant, while the R^2 value confirms that a substantial portion of ROE variations can be explained by firm size (CMIE Prowess Database, 2024).

Future Outlook

Future research on ROE trends in India can expand in several key areas. First, incorporating additional financial metrics such as ROA, ROCE, Net Profit Margin, and EPS could provide a more comprehensive analysis of corporate profitability (Damodaran, 2022). Examining debt levels and leverage would further enhance understanding of how firms balance equity and debt to optimize financial performance (SEBI, 2023). Macroeconomic and policy factors such as interest rates, inflation, GDP growth, FDI, and monetary policies significantly influence firm profitability (RBI Economic Outlook Report, 2024). Additionally, government policies, taxation, and regulatory changes shape financial performance and require deeper analysis (Finance Ministry Report, 2023).

A comparative study across countries could highlight structural differences and best practices in financial management by analyzing ROE trends in India versus global markets (World Bank Economic Survey, 2023). Understanding sector-specific ROE variations can also help investors identify industries with consistent profitability and emerging growth sectors like renewable energy, e-commerce, and fintech (McKinsey Industry Analysis, 2023).

The role of technological disruptions, including AI, blockchain, and automation, in shaping financial performance deserves further exploration (Deloitte Technology Report, 2023). Additionally, studying market disruptions such as global financial crises, pandemics, and geopolitical tensions can aid in developing risk management strategies (IMF Global Market Stability Report, 2024). Lastly, longitudinal studies over 20+ years would provide insights into corporate growth, decline, andturnaround strategies across economic cycles (Harvard Business Review, 2023). Addressing these areas can deepen the understanding of corporate financial performance and guide investment decisions in India’s evolving equity market.

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