

Comprehensive Analysis of Risk and Return Associated with Equity Stock Investment

Nandan N¹ and Mrs. Maithreye S H²

Student, Department of MBA¹

Assistant Professor, Department of MBA²

RNS Institute of Technology, Bengaluru, Karnataka, India

Abstract: This study provides a comprehensive analysis of the risk and return profiles of six prominent Indian automobile stocks: TVS Motor, Ashok Leyland, Bajaj Auto, MRF Ltd, Hero MotoCorp, and Mahindra & Mahindra, covering the period from 2020 to 2024. The findings reveal significant growth across the sector, with varying degrees of volatility. Key metrics such as stock price growth, earnings per share (EPS), return on equity (ROE), and price-to-earnings (P/E) ratios were analyzed, highlighting the importance of understanding both growth potential and associated risks.

Keywords: Indian Automobile Sector, Equity Stocks, Risk and Return Analysis, TVS Motor, Ashok Leyland, Bajaj Auto, MRF Ltd, Hero MotoCorp, Mahindra & Mahindra, Financial Metrics, Investment Decision

I. INTRODUCTION

The Indian automobile industry is a vital component of the economy, contributing significantly to GDP and employment. Recent trends, including the shift towards electric vehicles, digitalization, and changing consumer preferences, are reshaping the market landscape. This study aims to evaluate the risk and return associated with selected automobile stocks, providing insights for investors.

II. OBJECTIVES

- Evaluate the historical returns of selected Indian automobile stocks.
- To assess the risk factors associated with these automobile stocks.
- To analyze risk-adjusted returns to determine the efficiency of these stocks.
- To provide actionable recommendations for investors based on the analysis

III. LITERATURE REVIEW

The literature review encompasses various studies on risk and return analysis, highlighting significant findings in the context of equity investments:

- Ramdani et al. (2020) explored risk-return profiles of conventional vs. Sharia-compliant mutual funds, emphasizing ethical considerations in investment decisions.
- Dechow et al. (2002) introduced "Implied Equity Duration," a metric for measuring equity risk, linking it to changes in capital costs.
- Gouveia (2022) compared risk and return in developed versus emerging markets, noting that emerging markets offer higher potential returns but with greater volatility.
- Aliu et al. (2017) examined the impact of global and local factors on the financial performance of the automotive industry, providing insights into external influences on stock performance.

IV. RESEARCH METHODOLOGY

The research involves a quantitative analysis of historical stock performance, focusing on metrics such as annualized returns, volatility, and risk-adjusted returns using models like the Capital Asset Pricing Model (CAPM) and Sharpe

Ratio. Data was collected from reputable financial databases, and comparative analysis was conducted against the Nifty 50 index.

Statistical Tools:

The research employs various statistical tools for data analysis, including:

- **Descriptive Statistics:** To summarize the characteristics of the data set.
- **Regression Analysis:** To explore relationships between stock returns and influencing factors.
- **Time Series Analysis:** To analyze trends and forecast future performance.
- **Risk-Adjusted Return Metrics:** Such as Sharpe Ratio and Treynor Ratio to evaluate performance relative to risk.

V. DATA ANALYSIS AND INTERPRETATION

Table 1: Showing Risk and Return Analysis for TVS Motor Company(2020-2024)

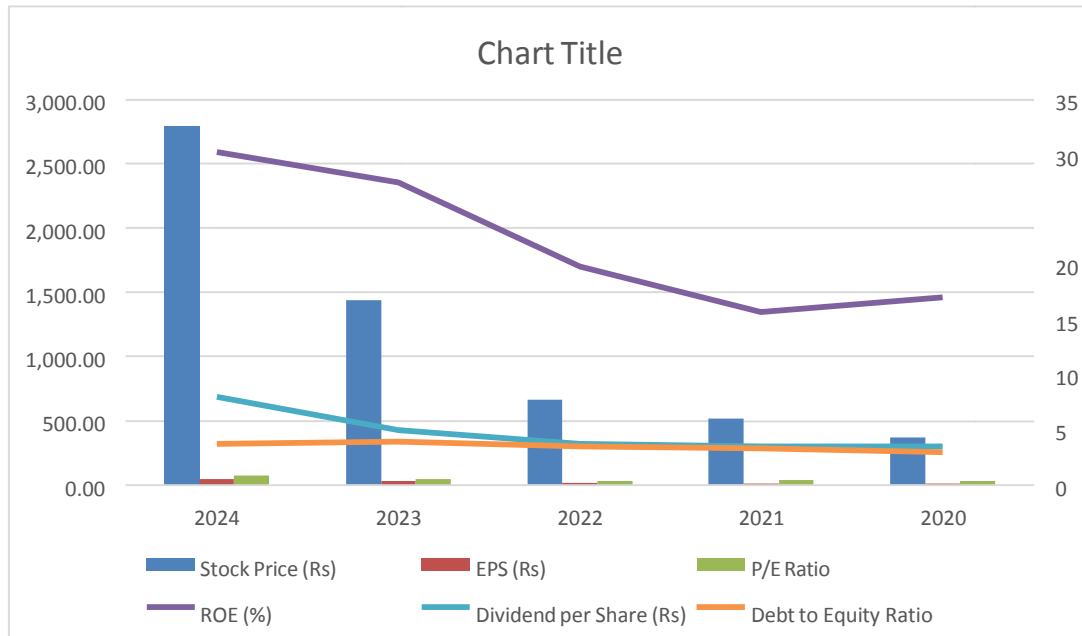


Table 2: Showing Risk and Return Analysis for Ashok Leyland (2020-2024)

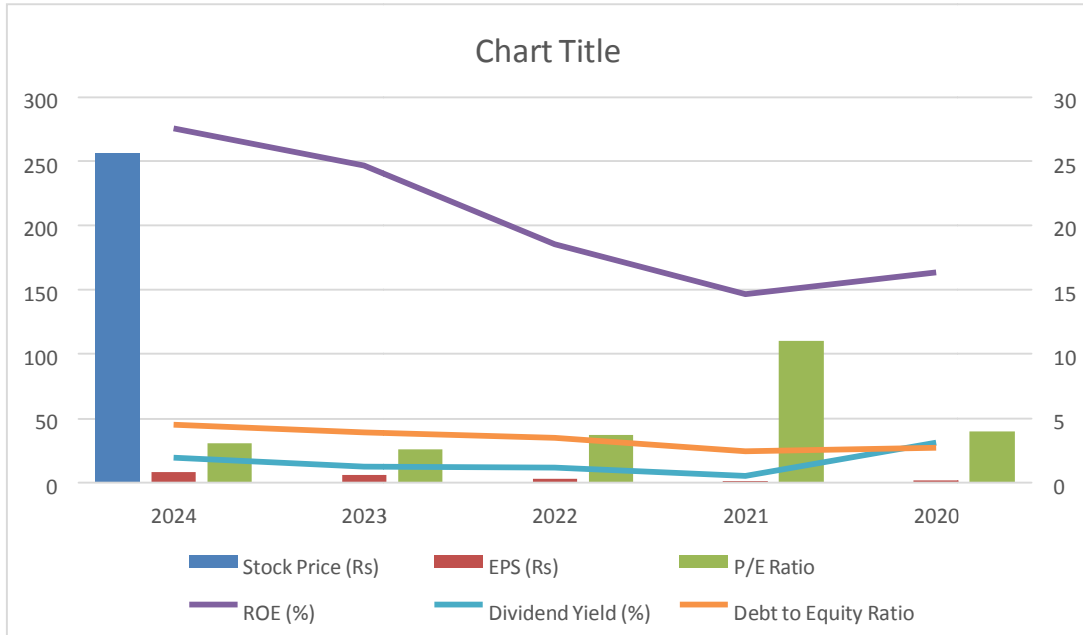


Table 3: Showing Risk and Return Analysis for Bajaj Auto (2020-2024)

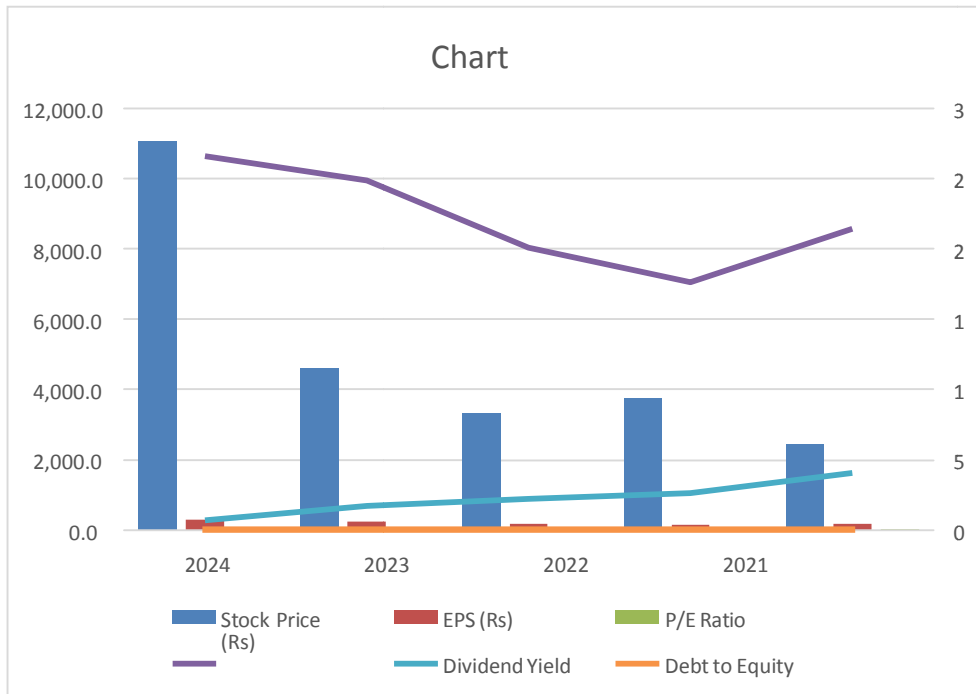


Table 4: Showing Risk and Return Analysis for MRF Ltd (2020-2024)

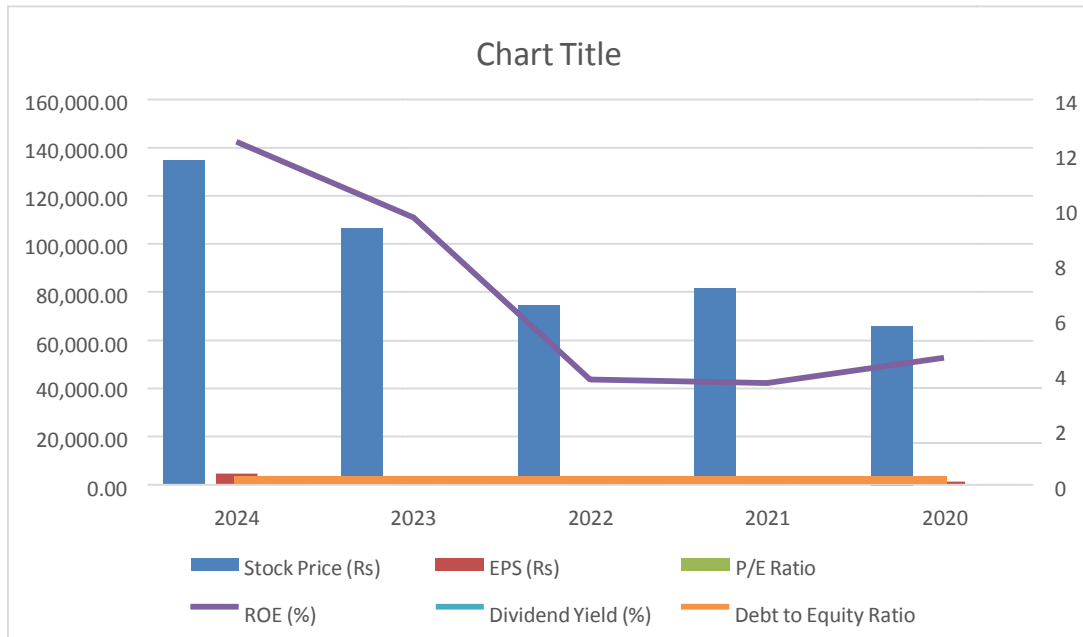


Table 5: Showing Risk and Return Analysis for Hero MotoCorp (2020-2024)

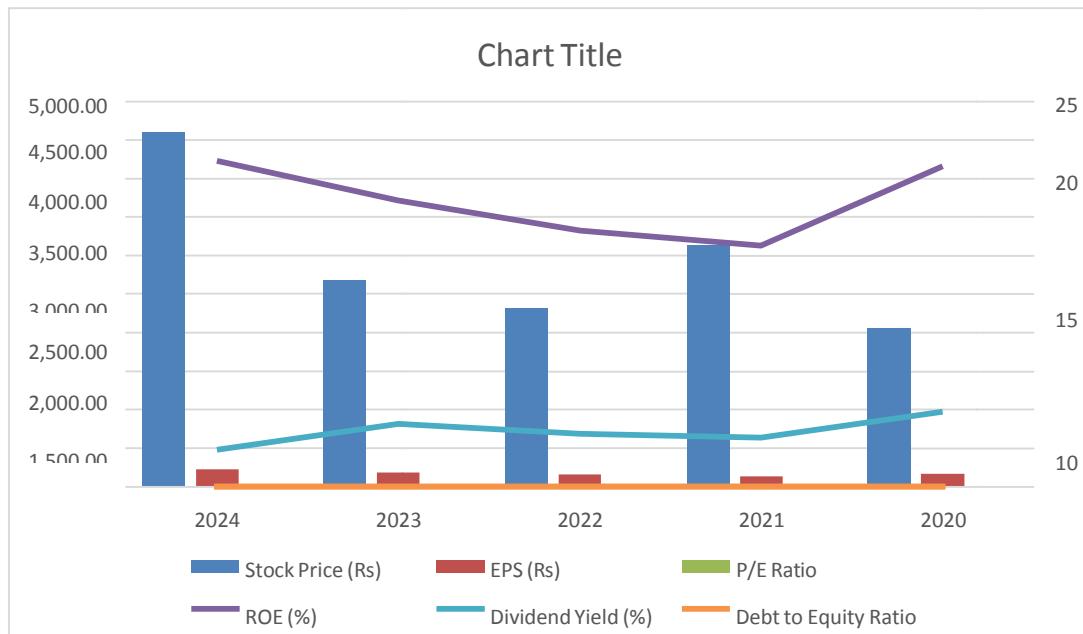


Table 6: Showing Risk and Return Analysis for Mahindra & Mahindra(2020-2024)

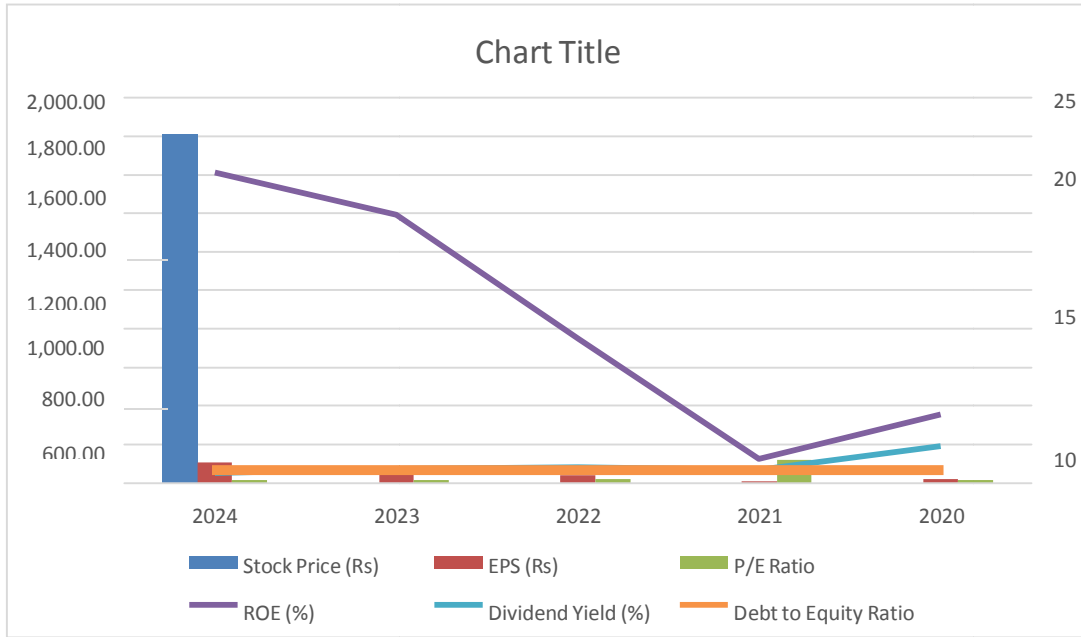


Table 7: Evaluating the TVS Motor Stock performance relative to the Nifty50 index

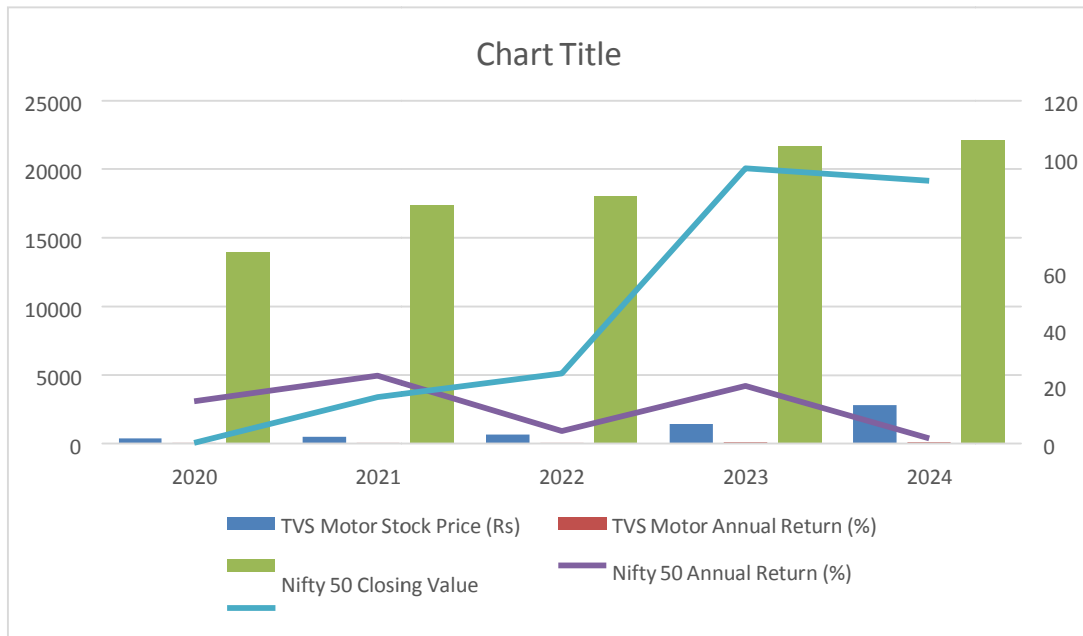


Table 8: Evaluating the Ashok Leyland Stock performance relative to the Nifty 50 index

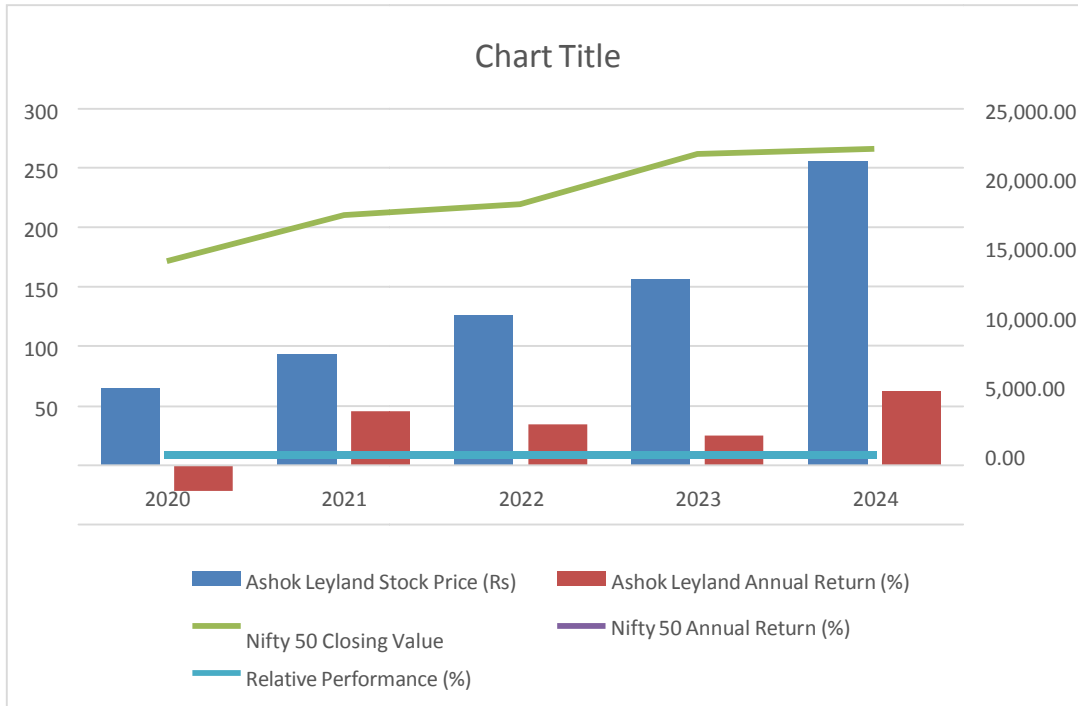


Table 9: Evaluating the Bajaj Auto Stock performance relative to the Nifty50 index

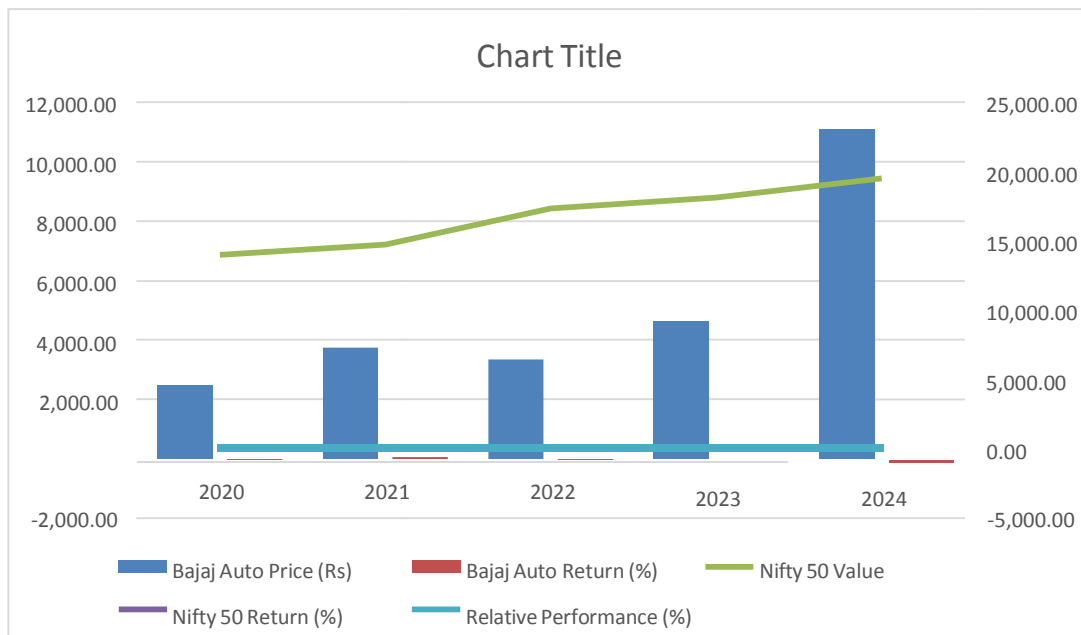


Table 10: Evaluating the MRF Stock performance relative to the Nifty50 index

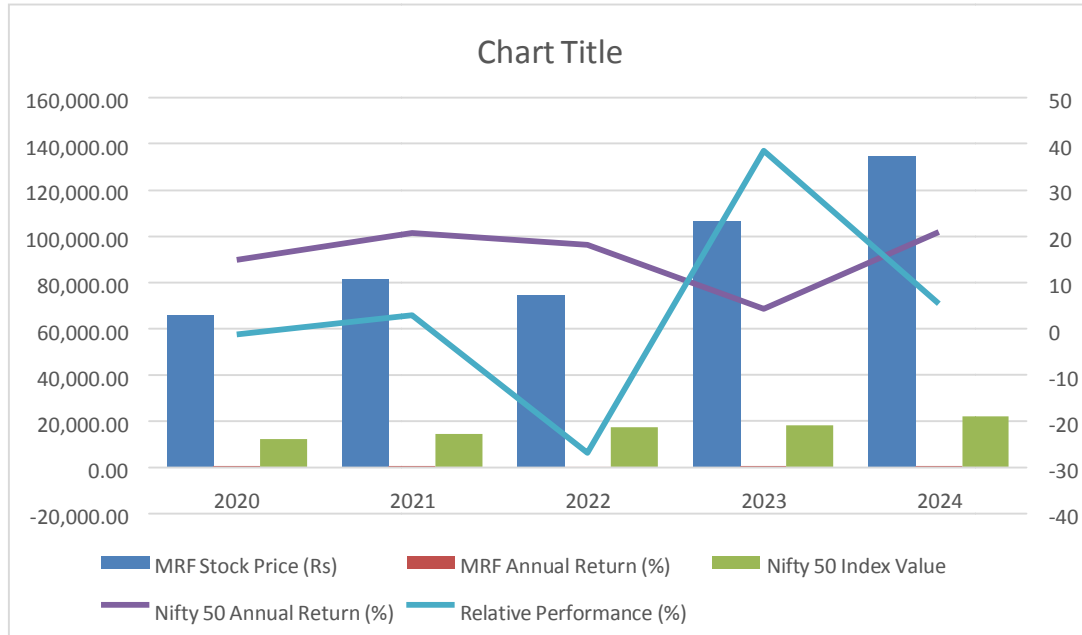


Table 11: Evaluating the Hero MotoCorp Stock performance relative to the Nifty 50 index

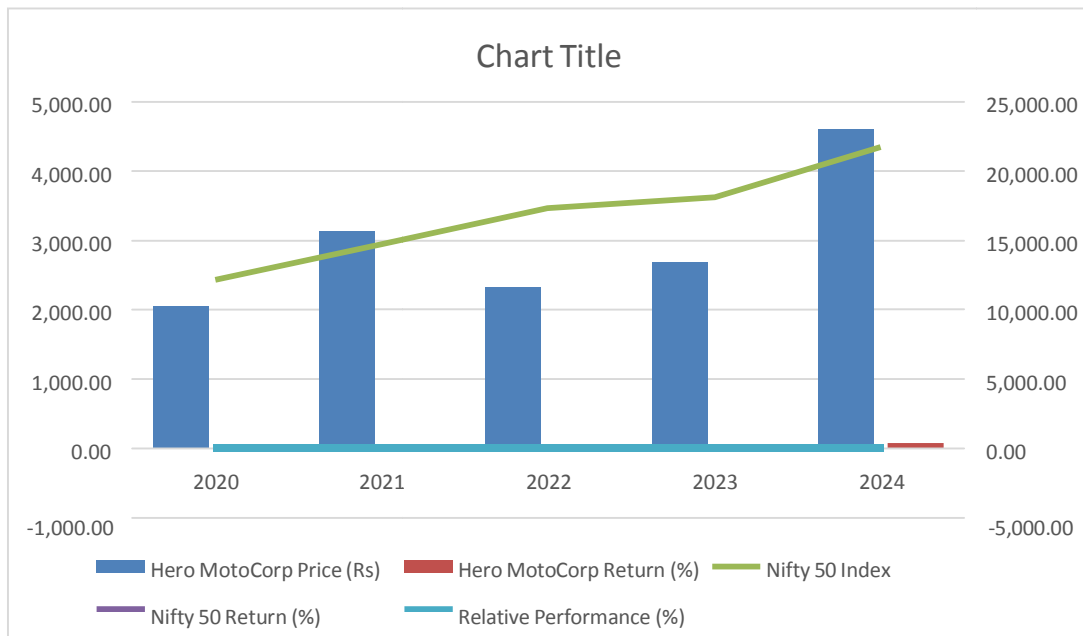
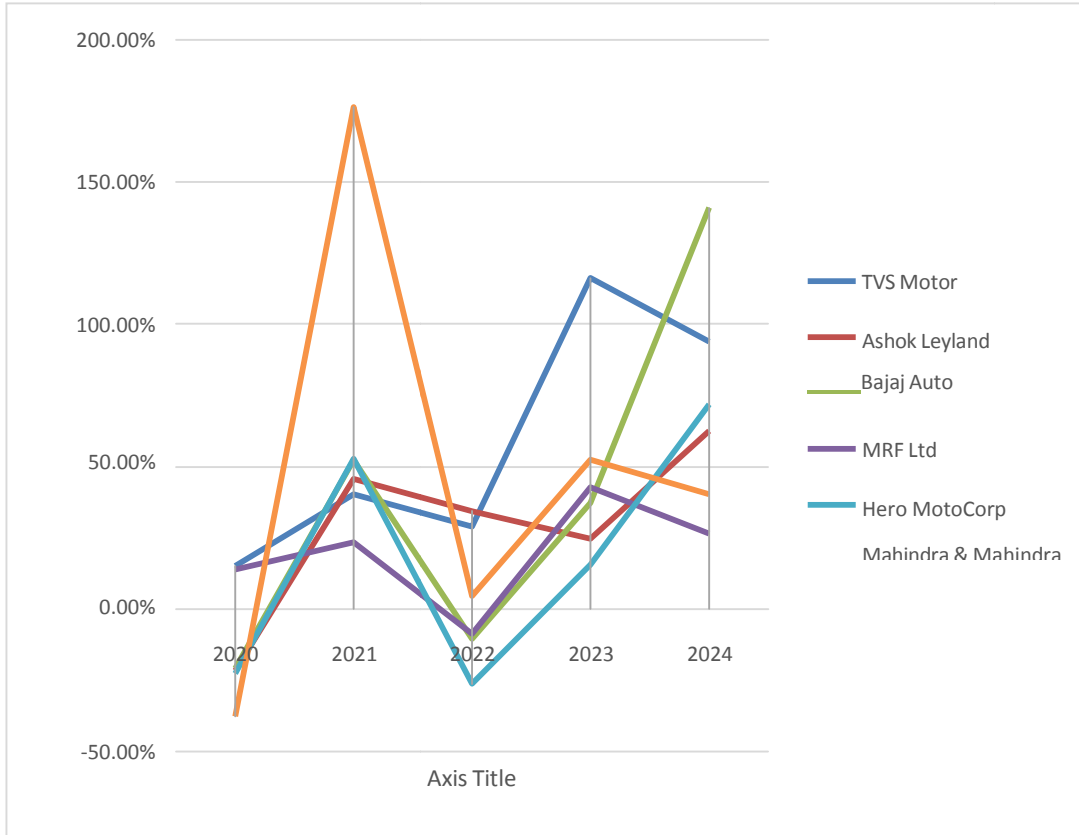


Table 12: Volatility



VI. FINDINGS

- **TVS Motor Company:** Stock price increased by 658%, with notable improvements in EPS and ROE. The rising debt-to-equity ratio indicates higher financial leverage.
- **Ashok Leyland:** Achieved a 297% growth in stock price, with substantial improvements in profitability metrics.
- **Bajaj Auto:** Experienced a 353% increase in stock price, but the declining dividend yield may deter income-focused investors.
- **MRF Ltd.:** Showed a stable performance with a 104% increase in stock price, suggesting a conservative financial approach.
- **Hero MotoCorp:** More than doubled its stock price, reflecting strong fundamentals despite declining dividend yield.
- **Mahindra & Mahindra:** Notable 518% growth in stock price, indicating strong recovery and improving financial health.

VII. CONCLUSION

The analysis underscores the importance of considering both growth prospects and potential risks in the Indian automobile sector. The performance of these stocks reflects the cyclical nature of the industry and its sensitivity to broader economic conditions. Investors should remain mindful of volatility patterns and financial metrics when making investment decisions.

REFERENCES

- [1]. Reilly, F. K., & Brown, K. C. (Investment Analysis and Portfolio Management).
- [2]. Brigham, E. F., & Ehrhardt, M. C. (Financial Management: Theory and Practice).
- [3]. Gouveia, J. F. (2022). Risk and Return in Developed and Emerging Stock Markets.
- [4]. Bloomberg, Reuters, Yahoo Finance, National Stock Exchange of India, BombayStock Exchange