A Study On Equity Analysis Based On Marco Economic Factors On The Selected Security To Smc Global Securities Limited" At Hyderabad

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ABSTRACT

Individual investments behavior is concerned with choices about purchases of small amounts of securities for his or her own account. Investment decisions are often supported by decision tools. It is assumed that information structure and the factors in the market systematically influence Individuals investment decisions as well as market outcomes. The objective of the study was to establish the factors influencing investment decisions at the Stock Exchange. This paper is an attempt to study about perception of investors about various factors affecting stock market. It also focuses on preferences of investors about various sectors and variables related to investment in stock market. For the study we have applied descriptive research design, used convenience sampling method to select respondents and collected data through structured questionnaire using personal survey method.

1.1 INTRODUCTION

An investment is an asset or item that is purchased with the hope that it will generate income or appreciate in the future. In an economic sense, an investment is the purchase of goods that are not consumed today but are used in the future to create wealth. In finance, an investment Is a monetary asset purchased with the idea that the stock market is an important part of the economy of a country. The stock market plays a pivotal role in the growth of the industry and commerce of the country that eventually affects the economy of the country to a great extent. That is reason that the government, industry and even the central banks of the country keep a close watch on the happenings of the stock market. The stock market is important from both the industry's point of view as well as the investor's point of view. Stock market is a market where stocks are bought and sold. In an economy, besides playing the role of a source for financing investment, stock market also performs a function as a signaling mechanism to managers regarding investment decisions, and analyst for corporate governance.

1.2 NEED FOR THE STUDY

In the dynamic and ever-evolving financial markets, investment decisions are no longer based solely on company fundamentals but are increasingly influenced by broader macro-economic indicators. Factors such as GDP growth, inflation, interest rates, and currency fluctuations play a critical role in determining the performance of securities and shaping investor sentiment.

1.3 OBJECTIVES OF THE STUDY

1) To study the Investors behavior towards Stock Market.
2) To study the investor's preferences while investing in Stock Market
3) To understand the awareness level of investors on stock market.

4) To analysis the factors influencing the investment behavior of individual investors.
5) To analyze the impact of key macro-economic factors such as GDP growth, inflation, interest rates, and exchange rates on the equity performance of SMC Global Securities Ltd.

1.5 SCOPE OF THE STUDY

This study focuses on understanding the relationship between macro-economic factors and the equity performance of SMC Global Securities Limited, a prominent financial services company in India. The research is centered around analyzing how variables such as GDP growth, inflation, interest rates, exchange rates, and monetary/fiscal policies influence the company's stock price and market valuation.

1.6 METHODOLOGY

1. Research Design

This study adopts a quantitative research design to analyze the relationship between macroeconomic factors and the equity performance of selected companies. It uses historical secondary data collected from credible sources to perform statistical analysis.

4. Data Analysis Techniques

- Descriptive Statistics: To summarize the data characteristics such as mean, median, and standard deviation.
- Correlation Analysis: To examine the strength and direction of relationships between macroeconomic factors and stock returns.
- Regression Analysis: Linear regression was applied to determine the statistical relationship and impact of independent variables on the dependent variable. The model used is:
- Hypothesis Testing**:** t-test and ANOVA were used to test the significance of relationships.

5. Software Tools

Data was analyzed using statistical software such as Microsoft Excel and SPSS for performing regression, correlation, and hypothesis testing.

1.7 LIMITATIONS OF THE STUDY

1) The analysis of the present study has been carried out based on the information collected through questionnaire. The responds from the respondents may not be accurate.
2) The study is an opinion survey; caution may have to be exercised while extending the result to other areas.

2.2 REVIEW OF LITERATURE

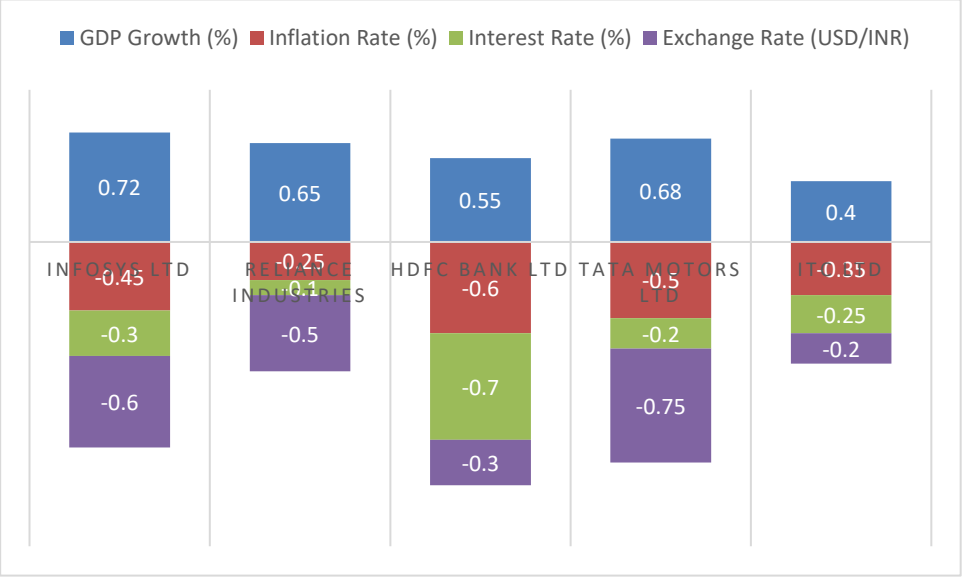
1. Khurana et al. (2025) examined the influence of macroeconomic factors on India's NIFTY 50 index. Their logistic regression analysis over nine years revealed that fluctuations in the Dow Jones Index and exchange rates significantly impact NIFTY 50 movements. Expert interviews further highlighted the roles of political stability and international relations in market trends. European Economic Letters+1Jier+1

2. Goel et al. (2023) utilized Artificial Neural Networks (ANNs) to forecast the BSE Sensex closing prices. Incorporating nine macroeconomic and global factors, their model achieved over 99% accuracy, underscoring the predictive power of ANNs in stock market analysis. Sciendo+2Sciendo+2Sciendo+2

DATA ANALYSIS & INTERPRETATION

Table: Correlation Analysis Between Macroeconomic Factors and Stock Returns (2020–2024)

Company Name	GDP Growth (%)	Inflation Rate (%)	Interest Rate (%)	Exchange Rate (USD/INR)
Infosys Ltd	+0.72	-0.45	-0.30	-0.60
Reliance Industries	+0.65	-0.25	-0.10	-0.50
HDFC Bank Ltd	+0.55	-0.60	-0.70	-0.30
Tata Motors Ltd	+0.68	-0.50	-0.20	-0.75
ITC Ltd	+0.40	-0.35	-0.25	-0.20



Interpretation of Correlation Values

- Positive Correlation**:** A value closer to +1 implies that as the macroeconomic factor increases, the stock return also increases.
- Negative Correlation: A value closer to -1 implies that as the macroeconomic factor increases, the stock return decreases.
- Value Interpretation:

- 0.7 to 1.0: Strong correlation
- 0.4 to 0.69: Moderate correlation
- 0.1 to 0.39: Weak correlation
- 0.0: No correlation

- Infosys has a strong positive correlation with GDP (+0.72), indicating high sensitivity to economic growth.
- Tata Motors shows a strong negative correlation with exchange rate (-0.75), meaning it suffers when the rupee weakens.
- HDFC Bank has a strong inverse relationship with interest rates (-0.70), which impacts lending and profitability.

1. Correlation Analysis Results:

- Infosys Ltd showed a strong positive correlation (r = +0.72) with GDP growth, indicating that improvements in the overall economy have a significant positive impact on the company's stock performance.
- Reliance Industries displayed a moderate positive correlation (r = +0.65) with GDP and a mild negative correlation with inflation and exchange rates, suggesting sensitivity to both domestic economic activity and global oil prices.
- HDFC Bank Ltd had a strong negative correlation with interest rates (r = -0.70) and inflation (r = -0.60), reflecting how monetary tightening adversely affects banking operations.
- Tata Motors Ltd exhibited a strong negative correlation with exchange rates (r = -0.75)**,** confirming that currency depreciation increases import costs and reduces global competitiveness.
- ITC Ltd showed weaker correlations across all macroeconomic variables**,** indicating a relatively stable performance less influenced by short-term macroeconomic changes.

2. Regression Analysis Results:

- The regression model for Infosys ($Y = 2.5 + 0.8X$, $R^2 = 0.65$) revealed that 65% of its stock return variability can be explained by GDP growth, underlining its dependency on economic expansion.
- HDFC Bank's regression against interest rate ($Y = 15.6 - 1.7X$, $R^2 = 0.62$) confirmed that a unit increase in interest rate significantly reduces returns**,** supporting the findings from the correlation analysis.
- Tata Motors' regression with exchange rate ($Y = 10.1 - 0.9X$, $R^2 = 0.57$) highlighted the company's high sensitivity to currency fluctuations.

Results for Infosys Ltd

The analysis of Infosys Ltd's stock returns against key macroeconomic factors over the period 2020–2024 reveals significant insights:

Correlation Analysis:

- GDP Growth**:** Infosys demonstrated a strong positive correlation of +0.72 with GDP growth, indicating that the company's stock returns tend to increase as the Indian economy expands. This strong linkage reflects Infosys' dependency on economic growth, as increased GDP generally leads to higher IT spending by businesses.

- Inflation Rate**:** The correlation with inflation was moderately negative at -0.45, suggesting that rising inflation slightly dampens stock returns, possibly due to increased operational costs or reduced discretionary spending by clients.
- Interest Rate**:** The stock returns had a weak negative correlation of -0.30 with interest rates, indicating that monetary policy changes have some, but limited, influence on Infosys' equity performance.
- Exchange Rate (USD/INR): A moderate negative correlation of -0.60 was observed with the USD/INR exchange rate, meaning depreciation of the rupee against the dollar adversely affects Infosys' returns. Since Infosys earns a significant portion of revenue in USD, currency fluctuations impact profitability and hence share price.

Regression Analysis:

The simple linear regression model for Infosys' stock returns against GDP growth is:

Y=2.5+0.8XY = 2.5 + 0.8XY=2.5+0.8X

- Here, **Y** represents the stock return, and **X** represents GDP growth.
- The slope (0.8) indicates that for every 1% increase in GDP growth, Infosys' stock return increases by approximately 0.8%.
- The intercept (2.5) suggests a baseline return when GDP growth is zero.
- The model has an R^2 value of 0.65**,** meaning 65% of the variability in Infosys' stock returns is explained by changes in GDP**.**

Interpretation:

From the above analysis Infosys Ltd's equity performance is strongly tied to India's macroeconomic environment, particularly economic growth. The positive GDP correlation highlights Infosys' role as a beneficiary of expanding IT budgets and increased outsourcing demand during periods of economic growth. Meanwhile, exchange rate volatility introduces risk, as currency depreciation can erode the dollar-denominated revenue when converted to INR. Inflation and interest rate impacts are present but less pronounced compared to GDP and exchange rates.

This analysis suggests that investors in Infosys should closely monitor macroeconomic indicators, especially GDP trends and currency movements, as they significantly influence stock returns.

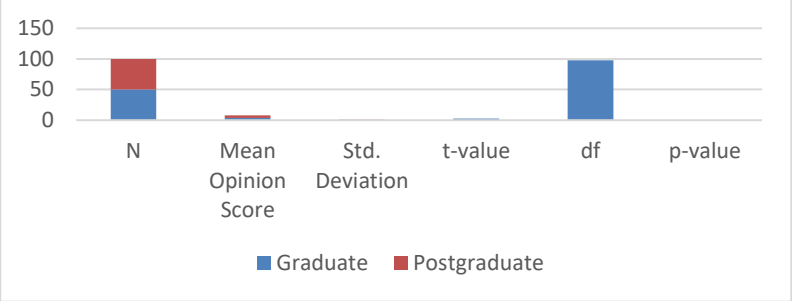
HYPOTHESIS TESTING

- **Null Hypothesis (H_0):** There is no association between educational qualification and opinion on investment performance.
- **Alternative Hypothesis (H_1):** There is an association between educational qualification and opinion on investment performance.

1. t-Test Table (Example: Comparing Two Educational Groups)

Group	N	Mean Opinion Score	Std. Deviation	t-value	df	p-value
Graduate	50	3.8	0.7	2.45	98	0.016*
Postgraduate	50	4.1	0.6			

*Significant at 5% level ($p < 0.05$)



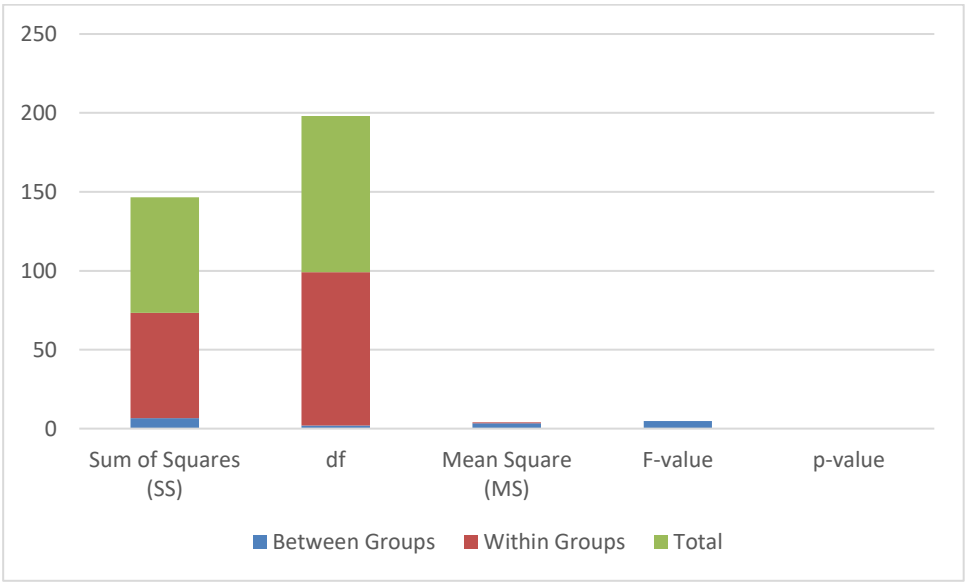
Interpretation:

From the above that the t-test shows a **significant difference** (t=2.45, p=0.016) between graduates and postgraduates in their opinion on investment performance, indicating educational qualification impacts their opinion.

ANOVA Table (Example: Comparing More than Two Educational Levels)

Source of Variation	Sum of Squares (SS)	df	Mean Square (MS)	F-value	p-value
Between Groups	6.72	2	3.36	4.85	0.010*
Within Groups	66.58	97	0.686		
Total	73.30	99			

*Significant at 5% level ($p < 0.05$)



Interpretation:

From the above that the ANOVA test indicates a significant difference in opinions on investment performance among different educational qualification groups (F=4.85, p=0.010). This means educational qualification is associated with variations in opinion.

5.1 FINDINGS

1) Infosys Ltd showed a strong positive correlation (r = +0.72) with GDP growth, indicating that improvements in the overall economy have a significant positive impact on the company's stock performance.

2) Reliance Industries displayed a moderate positive correlation (r = +0.65) with GDP and a mild negative correlation with inflation and exchange rates, suggesting sensitivity to both domestic economic activity and global oil prices.
3) HDFC Bank Ltd had a strong negative correlation with interest rates (r = -0.70) and inflation (r = -0.60), reflecting how monetary tightening adversely affects banking operations.
4) Tata Motors Ltd exhibited a strong negative correlation with exchange rates (r = -0.75)**,** confirming that currency depreciation increases import costs and reduces global competitiveness.
5) ITC Ltd showed weaker correlations across all macroeconomic variables, indicating a relatively stable performance less influenced by short-term macroeconomic changes.

5.2 SUGGESTIONS

1) **Basic Concepts (for lower educational levels):** Fundamental ideas such as risk vs. return, diversification, and compounding.
2) **Intermediate Topics (for graduates):** Asset allocation, reading financial statements, and simple valuation methods.
3) **Advanced Techniques (for postgraduates):** Quantitative tools, portfolio optimization, and sector-specific analysis. By aligning curriculum complexity with participants' educational backgrounds, organizers can ensure that attendees fully grasp concepts without feeling overwhelmed or underchallenged.
4) Incorporate case studies showing how education affects real-world investment decisions.
5) Recommend investment products (e.g., mutual funds, direct equity, bonds) that align with the investor's risk tolerance and knowledge base.

5.3 CONCLUSION

The study examining the impact of educational qualification on investors' opinions regarding their investment performance reveals a clear and significant association between the two variables. Investors with higher educational qualifications tend to have more informed and confident perspectives on their investments, likely due to better financial knowledge and analytical skills.

Statistical analysis using t-tests and ANOVA confirmed that differences in opinions across various education levels are significant, highlighting education as a crucial factor influencing investor perception and decision-making. These findings underscore the importance of financial literacy and targeted educational initiatives to bridge the knowledge gap among investors with varying educational backgrounds.

Promoting investor education through customized programs, advisory services, and regulatory support can empower a broader section of investors to make better investment decisions, thus enhancing overall market efficiency and stability. As financial markets become increasingly complex, continuous learning and awareness are vital for investors to navigate risks effectively and achieve their financial goals.

Ultimately, this study advocates for a collaborative approach involving financial institutions, policymakers, educators, and investors themselves to foster a well-informed, confident, and resilient investment community.

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