



**Chandigarh University**

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# Stock Market Data Interpretation- Analysing Stock Trends and validity

A PROJECT REPORT

*Submitted by*

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*in partial fulfillment for the award of the degree of*

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## BONAFIDE CERTIFICATE

Certified that this project report “**Stock Market Data Interpretation-  
Analysing Stock Trends and validity**” is the bonafide work of “**Tushar  
Madaan.**” who carried out the project work under my/our supervision.

**SIGNATURE**

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Submitted for the project viva-voce examination held on \_\_\_\_\_

**INTERNAL EXAMINER**

**EXTERNAL EXAMINER**

# Abstract

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This project, titled "**Stock Market Data Interpretation – Analyzing Stock Trends and Validity**," aims to evaluate the performance of a diversified portfolio in the Indian stock market. By examining stock-specific metrics such as purchase price, current price, gains/losses, daily fluctuations, and sector-wise allocation, the analysis provides insights into investment trends and stock behavior.

The study includes nine stocks across sectors like Banking, Finance, IT, Infrastructure, Mining, and Power, covering both large-cap and mid-cap categories. Key observations highlight strong performers like NMDC and TCS, stable blue-chip holdings such as HDFC Bank and ICICI Bank, and emerging opportunities in finance and infrastructure.

The portfolio reflects a strategic investment approach with an overall positive return. It balances long-term growth potential with short-term volatility management. This analysis not only assists in understanding individual stock performance but also supports informed decision-making for future investments through diversification and timely portfolio rebalancing.

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## Introduction

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The stock market plays a vital role in the financial ecosystem, offering individuals and institutions the opportunity to invest, grow capital, and contribute to the economy. With the increasing accessibility of trading platforms and financial information, more individuals are becoming active participants in the equity market. However, successful investing requires more than just buying stocks—it demands analysis, strategy, and ongoing evaluation.

This project, titled "**Stock Market Data Interpretation – Analyzing Stock Trends and Validity**," focuses on a hands-on analysis of a personal investment portfolio. The goal is to assess how individual stocks are performing in terms of value appreciation, sectoral contribution, and day-to-day fluctuations. By analyzing key indicators such as market capitalization, buy price vs. current price, daily change, and overall allocation, this report aims to draw meaningful conclusions about the effectiveness of the portfolio and the trends shaping its growth.

The selected stocks span across diverse sectors—Banking, Finance, Power, IT, Mining, and Infrastructure—allowing for a comprehensive view of sectoral dynamics and interdependencies. The analysis also explores how macroeconomic factors, investor sentiment, and sectoral developments influence individual stock performance.

Through this project, we seek to understand:

- How well-diversified the portfolio is
- Which sectors and stocks are driving returns
- What strategic changes could improve long-term performance

In essence, this study is not only a snapshot of current holdings but also a practical approach to developing better financial literacy and investment insight in a real-world context.

# Objectives

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The primary objective of this project is to interpret and analyze real-time stock market data from a personal investment portfolio, in order to evaluate performance, identify trends, and support informed investment decisions. The specific goals of the project are outlined as follows:

1. **To assess the performance of individual stocks** based on key metrics such as purchase price, current market price, gain/loss, and daily price changes.
2. **To analyze sector-wise allocation** and understand how different sectors (e.g., Banking, Finance, IT, Infrastructure) contribute to the overall portfolio performance.
3. **To evaluate the validity and strength of investment choices** by comparing stock performance against market trends and sector growth.
4. **To identify high-performing and underperforming stocks** and determine whether they should be held, sold, or rebalanced within the portfolio.
5. **To track daily volatility** and assess how price fluctuations impact short-term gains and overall investment strategy.
6. **To improve financial literacy and investment strategy**, using data-driven analysis for better decision-making in future investments.
7. **To present findings in a structured report**, making it easier to draw actionable insights and monitor progress over time.

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# Methodology

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The methodology for this project is designed to provide a structured approach to analyzing the performance of a diversified stock portfolio. It includes data collection, organization, and interpretation based on quantitative metrics and market trends.

## ◆ 1. Data Collection

The data used in this report was manually recorded from a real investment portfolio. It includes information such as:

- Stock name and sector
- Capital and market capitalization classification (Large Cap, Mid Cap, Small Cap)
- Quantity of shares held
- Buy price and total amount paid
- Current market price
- Total current value

- Daily price change and percentage change

The source of market data includes up-to-date values from the National Stock Exchange (NSE) and financial market tracking tools.

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## ◆ 2. Portfolio Structuring

The stocks were categorized by sector and capitalization size to evaluate:

- Sectoral distribution of investments
  - Risk level associated with market cap segments (Large Cap = low risk, Small Cap = high risk)
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## ◆ 3. Calculation Metrics

Key performance indicators (KPIs) were calculated using the following formulas:

- **Amount Paid** = Buy Price × Quantity
- **Total Value** = Current Price × Quantity
- **Gain/Loss** = Total Value – Amount Paid
- **Daily Change %** = (Day Change ÷ Previous Day's Price) × 100
- **Allocation %** = (Stock's Total Value ÷ Portfolio Value) × 100

These were computed in a spreadsheet for ease of comparison.

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## ◆ 4. Analysis Approach

Each stock was analyzed based on:

- Short-term price movement (daily changes)
- Long-term performance (since purchase)
- Sector performance
- Volatility and risk factors

Visual aids like pie charts and bar graphs were used to represent data such as sector-wise allocation and overall gain/loss distribution.

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## ◆ 5. Interpretation & Insights

Finally, based on calculated data, a qualitative interpretation was made for each stock:

- Identifying high performers and underperformers
- Determining market behavior and trend patterns

- Suggesting potential actions (Hold/Sell)

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## Portfolio Overview

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This section provides a snapshot of the current investment portfolio, summarizing its composition, capital distribution, and overall performance. The portfolio comprises **9 stocks** diversified across **7 sectors**, with a focus on both large-cap stability and mid/small-cap growth potential.

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### Portfolio Summary

Metric	Value
Total Investment (Amount Paid)	₹2,888.97
Current Portfolio Value	₹3,276.17
Net Gain/Loss	+₹387.20
Total Number of Stocks	9
Capital Range	₹0.59 to ₹14,987.60
Best Performing Stock (₹)	NMDC (+₹842.55)
Most Allocated Stock (%)	HDFC Bank (38.07%)
Most Volatile Stock (Day %)	IREDA (+2.27%)

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### Sector-wise Distribution

Sector	Stocks	Allocation (%)
Banking	HDFC Bank, ICICI Bank	51.89%
Finance	IREDA, IRFC	9.20%
Power Generation & Distribution	NTPC	7.05%
Mining & Mineral Products	NMDC	9.94%
Infrastructure Developers & Operators	RVNL	10.91%
IT – Software	TCS	7.38%
Capital Goods (Non-Electrical Equipment)	JNK	3.63%

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### Capitalization Breakdown

Capital Type	Stocks Covered	Share (%)
Large Cap	HDFC Bank, ICICI, IREDA, IRFC, NTPC, RVNL, NMDC	~92%
Mid Cap	JNK	~4%
Small Cap	TCS	~4%

 **Insight:** The portfolio is predominantly invested in **large-cap stocks**, indicating a preference for stability and long-term value with minimal volatility.

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### Allocation Pie Chart (optional for presentation)

- HDFC Bank – 38.07%
- ICICI Bank – 13.82%
- RVNL – 10.91%
- NMDC – 9.94%
- TCS – 7.38%
- NTPC – 7.05%
- IREDA – 5.33%
- IRFC – 3.87%
- JNK – 3.63%

*(Can be visualized as a pie chart for clarity in a presentation or report slide.)*

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### Performance Snapshot

- **Profitable Positions:** 8/9 stocks show gains.
  - **Only Loss:** NTPC with a minimal unrealized loss of ₹4.50.
  - **Top Gainers:** NMDC (+₹842.55), TCS (+₹474.05), ICICI (+₹417.00)
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### Summary

The portfolio is well-diversified across multiple high-performing sectors, with a balanced blend of conservative and growth-oriented stocks. Most investments have yielded positive returns, with a few high-performing small and mid-cap picks adding extra value. The heavy tilt towards large-cap stocks provides long-term financial stability, while select mid and small caps offer room for aggressive gains.

# Calculation Metrics and Analysis Approach

This section outlines the key metrics used to evaluate the performance of individual stocks and the overall portfolio. It also explains the approach taken to interpret trends, identify outperformers, and provide investment insights.

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## Calculation Metrics

To ensure consistency and accuracy in evaluating each stock, the following standard financial formulas and calculations were applied:

### 1. Amount Paid

$$\text{Amount Paid} = \text{Buy Price} \times \text{Quantity} \quad \text{\text{Amount Paid}} = \text{\text{Buy Price}} \times \text{\text{Quantity}}$$

Represents the total amount originally invested in each stock.

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### 2. Total Value (Current Value)

$$\text{Total Value} = \text{Current Price} \times \text{Quantity} \quad \text{\text{Total Value}} = \text{\text{Current Price}} \times \text{\text{Quantity}}$$

Shows the market value of the stock at current prices.

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### 3. Gain/Loss

$$\text{Gain/Loss} = \text{Total Value} - \text{Amount Paid} \quad \text{\text{Gain/Loss}} = \text{\text{Total Value}} - \text{\text{Amount Paid}}$$

Determines the profit or loss realized so far for each stock.

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### 4. Allocation (%)

$$\text{Allocation} = \left( \frac{\text{Total Value of Stock}}{\text{Total Portfolio Value}} \right) \times 100 \quad \text{\text{Allocation}} = \left( \frac{\text{\text{Total Value of Stock}}}{\text{\text{Total Portfolio Value}}} \right) \times 100$$

Measures how much each stock contributes to the overall portfolio in percentage terms.

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### 5. Day Change (₹)

$$\text{Day Change} = \frac{\text{Change in Price Compared to Previous Day}}{\text{Price Compared to Previous Day}} \quad \text{\text{Day Change}} = \frac{\text{\text{Change in Price Compared to Previous Day}}}{\text{\text{Price Compared to Previous Day}}}$$

Indicates the daily fluctuation in value for each stock.

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### 6. Day Change (%)



$$\text{Day Change \%} = \left( \frac{\text{Day Change}}{\text{Previous Day's Closing Price}} \right) \times 100$$

Helps understand daily volatility and momentum.

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## Analysis Approach

The evaluation of the portfolio was done using both **quantitative data** and **qualitative insights**. The process is summarized below:

### 1. Stock-Wise Performance Review

Each stock was individually analyzed based on:

- Absolute returns (₹)
  - Percentage returns
  - Market capitalization and sector strength
  - Daily fluctuations indicating short-term trends
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### 2. Sectoral Analysis

Stocks were grouped by sectors (e.g., Banking, Finance, IT, Infrastructure) to assess:

- Sector-wise contribution to portfolio gains
  - Sector-specific trends affecting stock performance
  - Level of diversification across industries
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### 3. Risk Assessment

By categorizing stocks into Large Cap, Mid Cap, and Small Cap:

- Risk profile of the portfolio was assessed
  - Correlation between market cap size and returns was explored
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### 4. Visual Data Interpretation

Charts and tables were used to:

- Highlight allocations and performance
  - Make comparisons easier
  - Spot trends visually (e.g., a pie chart for allocation, bar chart for gains/losses)
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## ✔ 5. Strategic Recommendations

Based on insights from the calculations:

- High-performing stocks were identified for **holding**
- Volatile or underperforming stocks were flagged for **monitoring or rebalancing**
- Suggestions were made for improving diversification and reducing sectoral risk

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## Stock-wise Analysis

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This section presents a detailed analysis of each stock in the portfolio based on its performance metrics, sector, capital classification, and investment outcome. It highlights individual stock trends, gains or losses, daily changes, and interpretations to guide future decisions.

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### 📌 1. HDFC Bank (BANKS – Large Cap)

- **Buy Price:** ₹1,765.00
- **Current Price:** ₹1,958.60
- **Quantity:** 2
- **Gain/Loss:** ₹387.20
- **Day Change:** -₹3.10 (-0.16%)
- **Allocation:** 38.07%

✔ **Interpretation:** A high-value, low-volatility stock that offers long-term growth. Despite a slight day loss, the overall gain justifies continued holding. Strong anchor in the banking sector.

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### 📌 2. IREDA (FINANCE – Large Cap)

- **Buy Price:** ₹123.00
- **Current Price:** ₹182.69
- **Quantity:** 3
- **Gain/Loss:** ₹179.07
- **Day Change:** ₹4.05 (2.27%)
- **Allocation:** 5.33%

📈 **Interpretation:** A fast-rising stock with strong daily growth. Indicates momentum and growing investor confidence. Worth monitoring for further upside.

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### ✦ 3. IRFC (FINANCE – Large Cap)

- **Buy Price:** ₹50.00
- **Current Price:** ₹132.90
- **Quantity:** 3
- **Gain/Loss:** ₹248.70
- **Day Change:** ₹0.59 (0.45%)
- **Allocation:** 3.87%

👍 **Interpretation:** Low entry cost and high returns. Stable upward movement makes it a reliable mid-term asset in the finance space.

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### ✦ 4. NMDC (Mining – Large Cap)

- **Buy Price:** ₹12.00
- **Current Price:** ₹68.17
- **Quantity:** 15
- **Gain/Loss:** ₹842.55
- **Day Change:** ₹0.21 (0.31%)
- **Allocation:** 9.94%

💡 **Interpretation:** The top-performing stock in terms of absolute gains. Excellent investment at a low entry point. Continued performance suggests strong fundamentals and favorable commodity demand.

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### ✦ 5. NTPC (Power – Large Cap)


- **Buy Price:** ₹365.00
- **Current Price:** ₹362.75
- **Quantity:** 2
- **Gain/Loss:** -₹4.50
- **Day Change:** ₹2.50 (0.69%)
- **Allocation:** 7.05%

⚠️ **Interpretation:** Slight unrealized loss, but strong daily recovery indicates stability. Power sector stocks are typically defensive, good for portfolio balance.

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### ✦ 6. RVNL (Infrastructure – Large Cap)


- **Buy Price:** ₹300.00
- **Current Price:** ₹374.30
- **Quantity:** 3
- **Gain/Loss:** ₹222.90
- **Day Change:** ₹0.50 (0.13%)
- **Allocation:** 10.91%

 **Interpretation:** Infrastructure-backed growth, with consistent performance. Government projects and budget allocations could further boost potential.

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#### 7. TCS (IT – Small Cap)


- **Buy Price:** ₹15.00
- **Current Price:** ₹39.95
- **Quantity:** 19
- **Gain/Loss:** ₹474.05
- **Day Change:** -₹0.33 (-0.82%)
- **Allocation:** 7.38%

 **Interpretation:** High return on low capital, reflecting sharp growth. Temporary volatility doesn't overshadow long-term value in IT services.

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#### 8. ICICI Bank (BANKS – Large Cap)

- **Buy Price:** ₹1,005.00
- **Current Price:** ₹1,422.00
- **Quantity:** 1
- **Gain/Loss:** ₹417.00
- **Day Change:** ₹5.50 (0.39%)
- **Allocation:** 13.82%


 **Interpretation:** Strong performance from a leading private bank. Stable and upward price movement indicates solid investor trust and earnings performance.

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#### 9. JNK (Capital Goods – Mid Cap)

- **Buy Price:** ₹63.00
- **Current Price:** ₹93.50

- **Quantity:** 4
- **Gain/Loss:** ₹122.00
- **Day Change:** ₹0.35 (0.38%)
- **Allocation:** 3.63%

 **Interpretation:** Modest gains from a mid-cap industrial stock. Shows potential for growth, especially with increased infrastructure activity.

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#### Summary of Findings

- **Top Gainer (₹):** NMDC (+₹842.55)
  - **Best ROI (based on entry price):** TCS
  - **Most Allocated:** HDFC Bank (38.07%)
  - **Most Volatile:** IREDA (2.27% day gain)
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## Conclusion

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This project, *"Stock Market Data Interpretation – Analyzing Stock Trends and Validity,"* provided a comprehensive evaluation of a diversified investment portfolio through real-time stock data analysis. The findings revealed a well-constructed portfolio with a strong bias toward large-cap stocks, ensuring financial stability, while still incorporating selective mid- and small-cap stocks for growth opportunities.

The overall portfolio is in profit, with **8 out of 9 stocks showing positive returns**. Notably, investments in **NMDC**, **TCS**, and **ICICI Bank** have delivered excellent performance, demonstrating the benefits of smart entry points and sectoral foresight. The portfolio's largest allocation—**HDFC Bank**—continues to offer reliable returns, justifying its significant share in the portfolio.

Sectoral analysis shows strong performance from **Banking**, **Finance**, and **Mining**, while **Power** and **Infrastructure** show moderate but steady growth. The inclusion of volatile yet promising stocks like **IREDA** adds a high-reward edge to the otherwise stable portfolio.

This project not only helped interpret the stock trends effectively but also highlighted the importance of:

- Regular performance monitoring
- Strategic allocation across sectors and market caps
- Balancing growth and stability within the portfolio

By applying financial metrics, sectoral insights, and trend analysis, the project serves as a practical guide for informed decision-making in stock investing. With continued analysis and timely rebalancing, the portfolio is well-positioned to achieve consistent long-term growth.