Evaluating Risk And Return In The Fmcg Sector: An Empirical Analysis Under Hedge Equity Ltd Palarivattam

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Abstract- *The project "Risk and Return Analysis of Selected FMCG Companies Listed on NSE" aims to assess and compare the risk and return potential of various FMCG stocks in India to help investors identify suitable investment opportunities. The study emphasizes the risk-return trade-off, a key concept in finance where higher returns usually involve higher risk. The analysis uses tools such as beta, standard deviation, Sharpe ratio, Treynor ratio, and Jensen's Alpha to measure and compare risk-adjusted returns across selected companies.*

A diversified investment strategy is advised, with firms like HUL and ITC offering strong stability and consistent returns, while stocks like Dabur and Marico present higher risk-reward profiles. The study guides investors in making informed portfolio decisions based on individual risk appetite.

Ultimately, this study provides a strategic roadmap for investors to align their financial goals with balanced risk-return expectations, especially within the FMCG sector.

Keywords- Risk-return trade-off, Beta, Sharpe Ratio, FMCG Sector, NSE, Treynor Ratio, Jensen's Alpha, Volatility, Investment Goals.

I. INTRODUCTION

The Fast-Moving Consumer Goods (FMCG) sector holds a pivotal position in the Indian economy, acting as a vital contributor to employment, consumption, and industrial growth. Encompassing products that are sold quickly and at relatively low cost, such as packaged food, beverages, toiletries, and household goods, the FMCG industry plays a significant role in shaping the daily lives of consumers. As consumer preferences evolve and disposable incomes rise, the FMCG sector has witnessed dynamic growth and diversification. The sector has also benefited from the expansion of modern retail, e-commerce platforms, and aggressive marketing strategies. As one of the most competitive industries, FMCG companies continuously strive to innovate and cater to a highly price-sensitive and brand-conscious customer base.

From an investment perspective, the FMCG sector is widely regarded as a defensive sector due to the inelastic nature of demand for its products. This characteristic makes FMCG stocks relatively stable and less sensitive to economic cycles, thus attracting both conservative and long-term investors. However, despite the perceived stability, FMCG stocks are not entirely free from market risks. Factors such as input cost volatility, regulatory changes, shifts in consumer behavior, and macroeconomic disruptions can significantly influence their performance. Hence, understanding the balance between risk and return becomes crucial for investors considering this sector.

Risk and return are two fundamental concepts in finance that are closely intertwined. Return represents the potential gain or loss from an investment, while risk refers to the uncertainty associated with these returns. A higher return is often accompanied by a higher level of risk. Therefore, evaluating the risk-return trade-off is essential for investors seeking to make informed investment decisions. By analyzing historical data, financial ratios, and market trends, investors can assess the past performance of stocks and forecast potential future outcomes.

In this context, the present study aims to evaluate the risk and return characteristics of selected FMCG companies listed on the National Stock Exchange (NSE). The empirical analysis is conducted under the guidance and supervision of Hedge Equity Ltd, a financial research and analytics institution based in Palarivattom, Kerala. The project focuses on analyzing five years of historical data to understand how different FMCG stocks have performed over time and how their risk levels compare with their returns.

The study uses various financial metrics and statistical tools such as standard deviation, beta, and average return to quantify risk and return. Beta is a widely used measure of a stock's volatility in comparison to the market as a whole. A beta greater than 1 indicates higher volatility and potentially higher returns, while a beta less than 1 suggests stability and lower risk. Standard deviation, on the other hand, measures the dispersion of returns around the mean, offering insights into the consistency of a stock's performance. The Sharpe Ratio is also considered to evaluate risk-adjusted returns by comparing excess return over the risk-free rate with the total risk taken.

The relevance of this project lies in its practical application for investors, portfolio managers, and financial analysts who seek to optimize their investment decisions based on empirical data. By comparing the performance of different FMCG companies, the study helps identify stocks that offer an optimal balance of risk and return, thereby aiding in portfolio diversification and risk management strategies.

The study also provides valuable insights into the strategic positioning of FMCG firms and their ability to withstand market volatility. Some companies may exhibit strong brand loyalty and consistent revenue streams, making them attractive for conservative investors. Others may show high growth potential but with increased volatility, appealing to investors with a higher risk appetite. This differentiation is crucial for aligning investment choices with individual risk profiles and financial goals.

II. REVIEW OF LITERATURE

1. **Prakash Chokkam reddy(2024):** This study investigates the risk and return of stocks from four selected FMCG companies over a two-year period. By utilizing secondary data from the BSE India website and employing descriptive statistics, the research identifies the risk and return profiles the findings reveal significant insights into the average returns and volatility of these stocks, aiding investors in making informed decisions. The study concludes with recommendations on the most suitable FMCG stocks for investment, highlighting those with the highest returns and lowest risk.

2. **Patel &Iyer(2023):**The study applied GARCH models and regression analysis to assess how these variablesinfluencedthevolatilityandreturnsofFMCGstocks.Thef indingsrevealedthatinflationhasa moderate negative impact on FMCG stock returns, as rising input costs can squeeze profit margins. However, FMCG firms mitigate this risk through price adjustments and cost management strategies. In contrast, the study found that FMCG stocks remain largely unaffected by fluctuations in interest rates, unlikebankingor real estate stocks. Theresearch also highlighted that GDP growth positive ly correlates with FMCG stock performance, as increased consumers pending drives high errevenue for FMCG firms. This study concluded that FMCG stocks act as a hedge against economic down turns, offering investors a safe investment avenue even in uncertain market conditions.

3. **Das & Mehta (2021):** Das and Mehta (2021) focused on the performance of FMCG stocks during the COVID-19 pandemic, evaluating how investor sentiment influenced stock returns during market disruptions. The study employed an event study methodology to analyze stock price reactions before, during, and after major pandemic-related events. The results indicated that while most industries, includingaviation,hospitality,andbanking,sawsharpdeclines,F MCGstocksremainedresilient,with companies like HUL, ITC, and Nestlé experiencing minor.

III. RESEARCH METHODOLOGY

The research methodology focuses on understanding the relationship between risk and return in the Indian FMCG sector, aiming to offer an accurate and reliable analysis of how key risk factors (such as market risk and company-specific volatility) correlate with the returns generated by selected FMCG companies listed on the NSE.

- Data Collection: The research will collect quantitative data from multiple sources such as financial statements, annual reports, and market data of FMCG companies. Secondary data from NSE-listed companies, industry publications, and stock performance databases will be utilized. The objective is to gather reliable data that will support the identification of patterns, trends, and correlations between risk and return in the FMCG sector.
- Research Design: A descriptive research design is adopted to provide a detailed and accurate representation of the risk-return characteristics of selected FMCG companies. This method allows for trend analysis without manipulating the underlying data. Financial indicators such as average return, standard deviation, beta, and Sharpe ratio will be systematically calculated. These variables will be analyzed over a defined time period to evaluate how different companies perform relative to the market and to each other.
- Data Analysis: Statistical tools and financial models will be employed to analyze the data and identify correlations between return and risk indicators. These analyses will help in determining which FMCG stocks offer better returns for a given level of risk.

- Population: All FMCG companies listed on the National Stock Exchange (NSE) form the population of the study.
- Sample: The study includes 10 leading FMCG companies listed on NSE: Based on market capitalization.
- Time Period: The research will analyze data from the last 5 years to capture recent trends and behaviors in the FMCG sector.

IV. DATA ANALYSIS

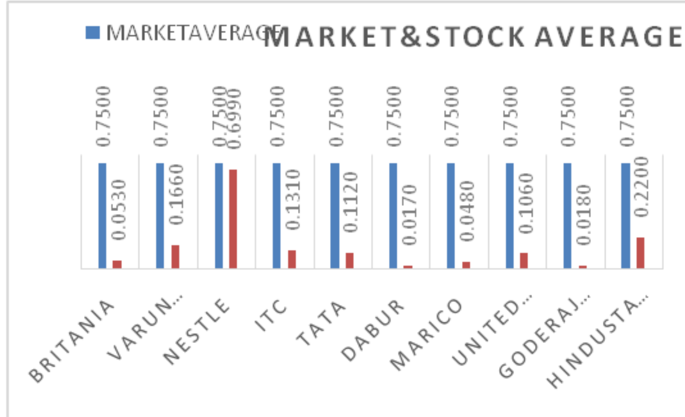
The below table represents an overview of key financial metrics for several major banks, including their average returns, standard deviation, variance, and covariance. Additionally, it presents various performance ratios such as Beta, Jensen's Alpha, Sharpe Ratio, and Treynor Ratio. These metrics provide a comprehensive analysis of the banks' risk and return characteristics, allowing for an assessment of their overall risk-adjusted returns

4.1 MARKET RETURN AND STOCK RETURN

TABLE NO: 1 TABLE SHOWING MARKET AVERAGE AND STOCK AVERAGE

FMCG COMPANIES	MARKET AVERAGE	STOCK AVERAGE
BRITANIA	0.7500%	0.0530
VARUN BEVERAGE LTD	0.7500%	0.1660
NESTLE	0.7500%	0.6990
ITC	0.7500%	0.1310
TATA	0.7500%	0.1120
DABUR	0.7500%	0.0170
MARICO	0.7500%	0.0480
UNITED SPIRITS LTD	0.7500%	0.1060
GODERAJ CONSUMER LTD	0.7500%	0.0180
HINDUSTAN UNILIEVER LTD	0.7500%	0.2200

CHART NO: 1 CHART SHOWING MARKET AVERAGE AND STOCK AVERAGE



Nestlé (0.6650) shows the highest stock average among the selected FMCG companies, performing close to the market average.

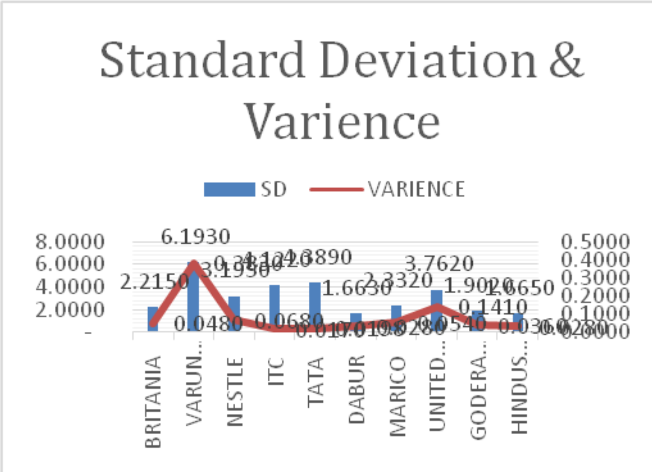
Varun Beverages (0.1650) and **Tata Consumer (0.0470)** show moderate stock returns**. Britannia (0.0250), Godrej (0.0100)**, and Hindustan Unilever **(0.0260)** have the lowest stock averages, indicating underperformance.

4.2 STANDARD DEVIATION AND VARIANCE

TABLE NO: 2 TABLE SHOWING STANDARD DEVIATION AND VARIANCE

COMPANY	STANDARD DEVIATION	VARIENCE
BRITANIA	2.2150	0.0480
VARUN BEVERAGE LTD	6.1930	0.3830
NESTLE	3.1950	0.0680
ITC	4.1220	0.0170
TATA	4.3890	0.0198
DABUR	1.6630	0.0280
MARICO	2.3320	0.0540
UNITED SPIRITS LTD	3.7620	0.1410
GODERAJ CONSUMER LTD	1.9020	0.0360
HINDUSTAN UNILEVER LTD	1.6650	0.0280

CHART NO: 2 CHART SHOWING STANDARD DEVIATION AND VARIANCE



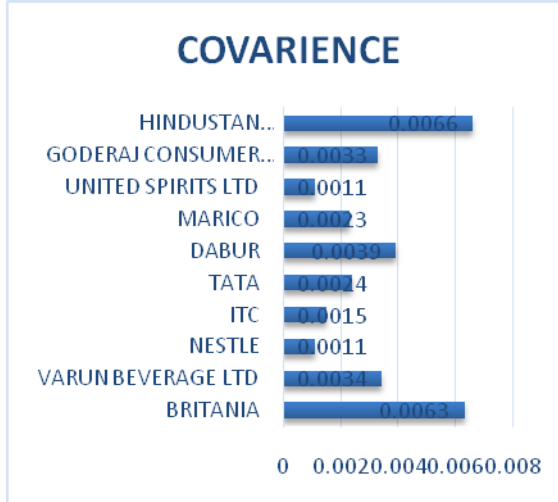
Volatility (Standard Deviation & Variance): Hindustan Unilever Ltd, Dabur, and Godrej Consumer Ltd are the least volatile stocks, indicating low risk and stable returns, making them suitable for conservative investors. Marico and Britannia show slightly higher but still moderate volatility, reflecting balanced risk and return potential. Nestle and ITC fall into the medium-risk category with moderate fluctuations. Tata Consumer and United Spirits Ltd exhibit relatively higher volatility, suggesting greater risk and potential reward. Varun Beverages Ltd stands out as the most volatile stock, indicating significant price fluctuations and the highest level of risk among the selected FMCG companies.

4.4 COVARIANCE

TABLE NO: 3 TABLE SHOWING COVARIANCE

COMPANY	COVARIENCE
BRITANIA	**0.0063**
VARUN BEVERAGE LTD	**0.0034**
NESTLE	**0.0011**
ITC	**0.0015**
TATA	**0.0024**
DABUR	**0.0039**
MARICO	**0.0023**
UNITED SPIRITS LTD	**0.0011**
GODERAJ CONSUMER LTD	**0.0033**
HINDUSTAN UNILEVER LTD	**0.0066**

CHART NO: 3 CHART SHOWING COVARIANCE



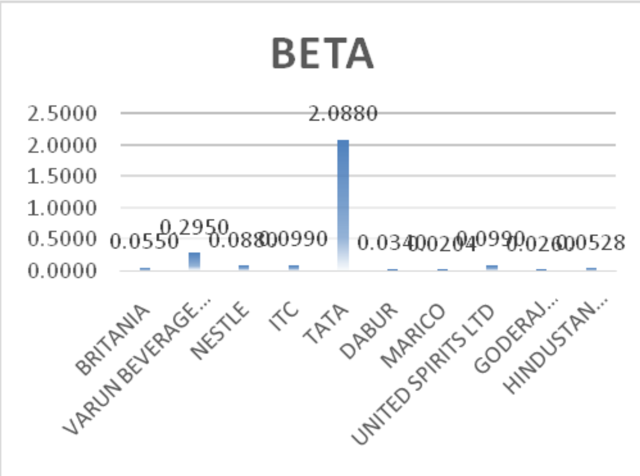
Covariance (Market Relationship): Hindustan Unilever Ltd and Britannia show the highest positive covariance, indicating strong alignment with overall market trends. Dabur, Varun Beverages Ltd, and Godrej Consumer Ltd exhibit moderate covariance, suggesting they generally follow the market but with less intensity. Tata Consumer and Marico show a lower correlation, moving somewhat independently.

4.5 BETA

TABLE NO: 4 TABLE SHOWING BETA

COMPANY	BETA
BRITANIA	**0.0550**
VARUN BEVERAGE LTD	**0.2950**
NESTLE	**0.0880**
ITC	**0.0990**
TATA	**2.0880**
DABUR	**0.0340**
MARICO	**0.0204**
UNITED SPIRITS LTD	**0.0990**
GODERAJ CONSUMER LTD	**0.0260**
HINDUSTAN UNILEVER LTD	**0.0528**

CHART NO:4 CHART SHOWING BETA



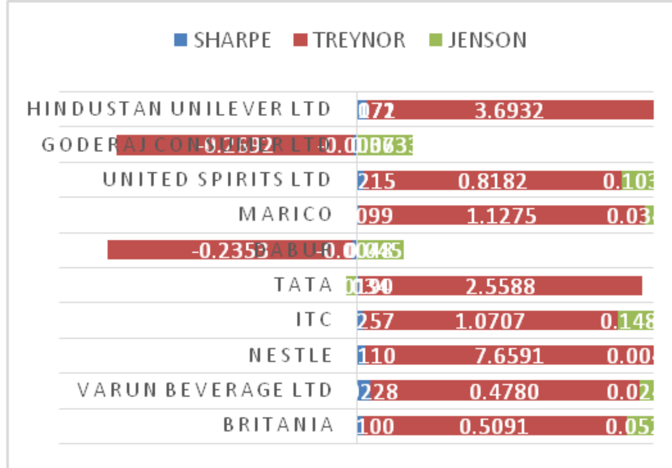
Beta:HDFC Bank, **Kotak Mahindra**, **PNB**, **IOB**, and **Union Bank** have betas below 1, indicating lower volatility and risk compared to the market. **SBI** and **Bank of Baroda** have betas around 1, showing moderate risk in line with the market. **ICICI Bank**, **Canara Bank**, and **Axis Bank** have betas above 1, signaling higher volatility and greater risk.

4.6 JENSON RATIO, SHARPE RATIO AND TREYNOR RATIO

TABLE NO: 9 TABLE SHOWING JENSON RATIO, SHARPE RATIO AND TREYNOR RATIO

COMPANY	SHARPE	TREYNOR	JENSON
BRITANIA	0.0100	0.5091	0.0520
VARUN BEVERAGE LTD	0.0228	0.4780	0.0247
NESTLE	0.2110	7.6591	0.0046
ITC	0.0257	1.0707	0.1487
TATA	0.0190	2.5588	-0.1034
DABUR	-0.0048	-0.2353	0.0450
MARICO	0.0099	1.1275	0.0343
UNITED SPIRITS LTD	0.0215	0.8182	0.1036
GODERAJ CONSUMER LTD	-0.0037	-0.2692	0.0633
HINDUSTAN UNILEVER LTD	0.1171	3.6932	-0.0072

CHART NO: 6 CHART SHOWING JENSON RATIO, SHARPE RATIO AND TREYNOR RATIO



Performance Ratios (Sharpe, Treynor, Jensen): Nestlé and Hindustan Unilever Ltd stand out with strong Sharpe and Treynor ratios, indicating excellent risk-adjusted returns. ITC, despite moderate Sharpe, shows the highest Jensen's Alpha, meaning it significantly outperformed the market. United Spirits, Britannia, and Marico show modest risk-adjusted returns with positive alpha, reflecting decent performance. Tata Consumer shows good Treynor but negative alpha, suggesting underperformance. Dabur and Godrej Consumer Ltd report negative Sharpe and Treynor ratios, indicating poor risk-adjusted returns, though they still achieved slightly positive alpha, possibly due to specific stock advantages.

V. FINDINGS, SUGGESION AND CONCLUSION

5.1 FINDINGS

1. **Stock Returns:**

- **Nestlé (0.699%)** stands out with the highest return, showing strong performance close to the market average.
- **Hindustan Unilever Ltd (0.220%)** and **Varun Beverages Ltd (0.166%)** also perform well, offering better returns than most FMCG peers.
- **ITC (0.131%)**, **Tata Consumer (0.112%)**, and **United Spirits Ltd (0.106%)** have moderate returns, though still below the market average (0.750%).
- **Britannia (0.053%)** and **Marico (0.048%)** show low returns, underperforming the market significantly.
- **Godrej Consumer Ltd (0.018%)** and **Dabur (0.017%)** have the lowest returns, indicating weak stock performance.

2. **Volatility:(SD & VARIENCE)**

- **Dabur (1.663%)** and **Hindustan Unilever Ltd (1.665%)** show the **lowest volatility**, making them the least risky stocks.
- **Godrej Consumer Ltd (1.902%)** and **Marico (2.332%)** follow with low to moderate volatility.
- **Britannia (2.215%)**, **Nestlé (3.195%)**, and **United Spirits Ltd (3.762%)** indicate **moderate volatility**.
- **ITC (4.122%)** and **Tata Consumer (4.389%)** are relatively more volatile.
- **Varun Beverages Ltd (6.193%)** is the **most volatile**, implying the highest risk among the group.

3. **Covariance:**

- **Hindustan Unilever Ltd (0.0066)** and **Britannia (0.0063)** have the **highest covariance**, showing strong alignment with market trends.
- **Dabur, Varun Beverages Ltd, and Godrej Consumer Ltd** show moderate covariance, suggesting reasonable market correlation.
- **Marico and Tata** reflect low to moderate market linkage.
- **Nestlé, ITC, and United Spirits Ltd** have **the lowest covariance (0.0011 - 0.0015)**, implying more independent stock movement and potential for diversification.

4. **Beta:**

- **Tata Consumer** has a **very high beta (2.088)**, making it highly sensitive to market movements and riskier.
- **Varun Beverages Ltd (0.295)** is moderately market-sensitive.
- All other companies — **Dabur, Marico, HUL, Britannia, ITC, Nestlé, Godrej, United Spirits** — have **extremely low betas (<0.1)**, indicating they are **defensive stocks** with very low market-related volatility.

5. Risk-Adjusted Performance (Jensen’s Alpha, Sharpe Ratio, Treynor Ratio):

- **Nestlé** leads in Sharpe and Treynor ratios, showing the **best risk-adjusted performance**.
- **ITC** has the **highest Jensen’s Alpha**, indicating **significant outperformance** relative to expected returns.
- **United Spirits Ltd** and **HUL** also provide good risk-adjusted returns.
- **Varun Beverages Ltd, Marico, and Britannia** offer moderate Sharpe and Treynor values with positive alpha, suggesting acceptable performance.
- **Tata Consumer** has a good Treynor ratio but a **negative Jensen’s Alpha**, indicating **underperformance** relative to its risk.
- **Dabur and Godrej Consumer Ltd** have **negative Sharpe and Treynor ratios**, showing **poor risk-adjusted performance** despite small positive alpha.

5.2 SUGGESTIONS

For Risk-Averse Investors:

- **Hindustan Unilever Ltd**: Offers consistent performance with low volatility; ideal for conservative investors seeking stability.
- **Nestlé**: Near-market average returns with relatively low risk; reliable for long-term safe investment.
- **Britannia**: Low volatility but also lower returns; suitable for low-risk tolerance but with limited gains.

For Moderate Risk Investors Seeking Steady Returns:

- **ITC**, **Tata Consumer**, **United Spirits Ltd**: Balanced returns with manageable risk, suitable for investors preferring steady, moderate growth.
- **Varun Beverages Ltd**: Slightly higher return with moderate risk, ideal for those comfortable with minor fluctuations.

For High-Risk, High-Return Investors:

- **No FMCG stock exhibits extremely high returns with matching high risk**, but **Varun Beverages Ltd** could serve as a relatively higher-return pick within the FMCG space for those seeking some growth potential.

For a Balanced Portfolio:

- Combine **Nestlé** and **HUL** for stability and quality returns.
- Add **ITC** or **Tata Consumer** for moderate growth.
- Include **Varun Beverages Ltd** to add a slightly aggressive component.

Avoid or Monitor Closely:

- **Dabur** and **Godrej Consumer Ltd**: Show very low returns, may not be ideal unless specific growth catalysts are expected.
- **Marico** and **Britannia**: Underperforming in returns, should be watched closely before investing heavily.

Regular Monitoring:

- Track **Varun Beverages Ltd** and **United Spirits Ltd** for changing risk-return dynamics.
- Monitor all low-performing stocks like **Dabur** and **Godrej Consumer Ltd** for potential turnaround signals.

5.3 CONCLUSION

The Indian FMCG sector presents a diverse set of investment options, catering to various investor risk appetites—from conservative individuals to those seeking moderate growth and long-term stability. The key to successful investing in this sector lies in understanding the balance between risk, return, and consistency.Among the FMCG players, **Nestlé** emerges as a standout performer, offering returns that are very close to the market average while maintaining manageable levels of volatility. This makes it an ideal choice for investors seeking strong performance without excessive risk. **Hindustan Unilever Ltd** and **Varun Beverages Ltd** also show promise, delivering consistent returns and representing solid investment opportunities for those looking for quality stocks with reasonable growth potential.Stocks like **ITC**, **Tata Consumer**, and **United Spirits Ltd** offer a balanced profile of moderate returns and stable risk, making them suitable for investors seeking steady long-term growth. These stocks are best suited for individuals aiming for predictable performance without the high-risk exposure of more volatile sectors.For conservative, risk-averse investors, **Nestlé** and **HUL** stand out due to their historically stable performance, solid fundamentals, and lower volatility. These companies are well-positioned for those who prioritize capital preservation while still seeking modest growth.On the other hand, stocks like **Dabur**, **Godrej Consumer Ltd**, **Britannia**, and **Marico** have underperformed in terms of stock returns and may require closer monitoring. While they may offer stability, their limited return potential makes them less appealing unless specific positive triggers are anticipated in the near future.A smart investment strategy in the FMCG sector should focus on **diversification across performance categories**. By including high-performing and stable companies like **Nestlé** and **HUL**, and balancing them with moderate-growth options like **ITC** and **Tata Consumer**, investors can optimize their portfolio for both growth and security. Including a slightly aggressive pick like **Varun Beverages Ltd** can enhance return potential without significantly increasing risk.Lastly, regular review of stock performance is essential, especially for underperformers or those with changing market dynamics. By staying informed and adaptable, investors can fine-tune their portfolio as needed to align with both personal financial goals and the evolving FMCG landscape.A balanced and diversified approach will help investors navigate market shifts effectively, ensuring consistent performance while mitigating risk across different time horizons in the ever-evolving Indian FMCG sector

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