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Riding the Trends: Momentum and Contrarian Strategies in Bombay's Stock Market

Er Karthik[1], Dr. Martha Sucharitha[2]

[1,2]Department of Professional Studies, Christ University

ABSTRACT

This study examines the effectiveness of momentum and contrarian investment strategies in the Indian stock market using sectoral indices from the Bombay Stock Exchange (BSE). Momentum strategies involve buying recent winners and selling losers, while contrarian strategies take the opposite approach. Using a dataset of 367 stocks across nine key sectors, this research analyzes short-term (1-year), medium-term (5-year), and long-term (10-year) returns to assess the persistence of these strategies. The findings indicate that momentum effects are significant in the Indian market, with top-performing stocks in the 1-year period continuing to generate superior returns over the long term. Contrarian strategies, however, exhibit effectiveness primarily during market downturns, aligning with behavioral finance theories such as overreaction and herding behavior. Sectoral analysis reveals distinct performance trends, with Consumer Non-Cyclical and Communications sectors outperforming, while Financial and Utilities sectors lag. Regression analysis confirms a statistically significant relationship between short-term and long-term returns, supporting the viability of momentum investing in India. The study provides insights for investors on strategic portfolio allocation and highlights the impact of market inefficiencies and behavioral biases on stock performance.

Keywords: Momentum investing, Contrarian strategy, Indian stock market, Sectoral analysis, Behavioral finance, Market inefficiencies, Portfolio allocation, Regression analysis, Investment strategies, Stock performance.

Introduction

Momentum and contrarian strategies are two fundamental approaches in financial markets. Momentum strategies involve buying stocks that have performed well in the recent past and selling those that have performed poorly, while contrarian strategies take the opposite approach—buying recent losers and selling winners (Doan et al., 2016). These strategies can coexist, with contrarian approaches often dominating short-term horizons and momentum strategies proving more effective in intermediate to long-term periods. The effectiveness of these strategies depends on market conditions, investor behavior, and macroeconomic factors (Chen et al., 2012).

Empirical studies reveal that credit risk influences the profitability of both momentum and contrarian strategies. Higher returns are observed for medium and high-risk portfolios, particularly in South Asian markets (Hunjra et al., 2020). Psychological factors also play a crucial role in investor behavior, with studies suggesting that traders perceive momentum signals as more predictive than contrarian ones (Zielonka et al., 2020). Fund managers' risk preferences further shape their strategy selection—momentum

traders exhibit lower risk aversion, while contrarian traders often demonstrate overconfidence (Menkhoff & Schmidt, 2005).

Research across different markets highlights the time-varying nature of these strategies. In Australia, contrarian strategies dominate in the short term, while momentum strategies prevail over longer horizons (Doan et al., 2016). The Chinese stock market benefits significantly from short-term contrarian effects, especially during economic downturns (Chen et al., 2012). Similarly, Indian financial markets exhibit a mix of momentum and contrarian effects, with credit risk playing a significant role in determining returns (Jagirdar & Gupta, 2023).

The Indian stock market provides a compelling landscape for studying investment strategies due to its unique inefficiencies, investor behaviors, and sectoral compositions. Research indicates that the market exhibits long-term volatility persistence and asymmetric responses to economic news (Ali et al., 2022). Studies have also identified herding behavior, particularly during crises such as the COVID-19 pandemic (Dhall & Singh, 2020). While some researchers find evidence of market inefficiency in the Bombay Stock Exchange (Elangovan et al., 2022), others identify arbitrage opportunities that traders can exploit (Zhou et al., 2011).

Market conditions influence the profitability of momentum and contrarian strategies. Momentum strategies tend to be more effective during economic upturns, while contrarian strategies offer better performance in declining markets (Munir et al., 2022). In India, value and contrarian strategies often select different stocks, suggesting that these approaches can coexist within the same efficiency framework (Jagirdar & Gupta, 2023). A strong absolute momentum effect exists in Indian stocks, though it is susceptible to occasional severe losses (Singh et al., 2022).

Behavioral finance provides additional insights into investment strategy effectiveness. Investors often exhibit irrational behaviors, such as market imitation and loss aversion, which contribute to overreactions or underreactions in stock prices (Ahmad, 2022). Overconfidence bias, in particular, has been linked to asset mispricing and trading inefficiencies (Abínzano et al., 2014). Institutional investors tend to engage in momentum trading, while retail investors lean toward contrarian strategies (Economou et al., 2022).

Sectoral performance further refines investment strategy applications. Studies suggest that sector-specific growth trends significantly influence stock returns in both the short and long run (Sehrawat & Giri, 2017). The energy sector has shown resilience during recent market crises, while financial and IT sectors experience high volatility spillovers (Majumder & Nag, 2018). Certain strategies, such as momentum investing, may be better suited for specific sectors like clean energy, while contrarian strategies tend to outperform in traditional energy markets (Day et al., 2022).

Understanding market volatility is crucial in assessing investment strategies. Investors tend to exhibit stronger behavioral biases, such as disposition effects, during high-volatility periods (Patel et al., 2024). Foreign institutional investors significantly impact implied volatility in India's equity derivatives market (Sharma et al., 2023). Advanced risk-managed momentum approaches have demonstrated success in volatile market environments (Singh et al., 2022).

Empirical studies across global markets reveal varying momentum and contrarian effects. Short-term momentum and long-term contrarian effects have been observed in countries such as India, Spain, and Brazil (Sehgal & Balakrishnan, 2002; Forner & Marhuenda, 2003). Market conditions play a crucial role, with momentum strategies generating higher profits in bullish markets and contrarian strategies excelling during downturns (Maheshwari & Dhankar, 2018). Despite extensive research, gaps remain in

understanding the impact of risk factors, behavioral biases, and macroeconomic conditions on investment strategy performance (Galariotis, 2014).

Given these insights, studying the interaction between momentum and contrarian strategies in India's financial markets can provide valuable implications for investors, policymakers, and portfolio managers. Further research into sector-specific effects, behavioral finance, and volatility influences will contribute to a more nuanced understanding of these investment approaches.

LITERATURE REVIEW

1) **Maheshwari, S., & Dhankar, R. S. (2016). A study on momentum and contrarian profitability: Insights from the Indian stock market with alternative approaches**. This study examines momentum and long-term contrarian strategies in India's National Stock Exchange from 1997–2013. Using multiple return computation methods, it finds that profits are not due to computational errors. Both strategies remain valid, with momentum effective short-term and contrarian profitable long-term. The study provides useful insights for investors but overlooks transaction costs.
2) **Aravind, M. (2016). Momentum and contrarian strategies: An investigation of sectoral portfolios in the National Stock Exchange.** Analyzing sectoral portfolios in India's National Stock Exchange (2009–2015), this study finds short-term contrarian effects in Auto, Banking, Energy, Media, and Metals. Long-term trends indicate momentum persistence, guiding investors toward informed decisions. However, sectoral variations limit the generalizability of results.
3) **Singh, A. (2018). Momentum and contrarian strategies: A study on the National Stock Exchange of India.** Using NIFTY 50 stocks (8-year data), this study identifies momentum effects in 72% of stocks. Financial Services, IT, Telecom, Pharmaceuticals, and Metals exhibit both momentum and contrarian trends, requiring a sector-based investment approach. Findings suggest that momentum dominates large-cap stocks, with contrarian strategies dependent on risk tolerance.
4) **Han, D. (2013). Evaluation of the profitability of momentum and contrarian strategies in China's stock market.** Evaluating momentum and contrarian strategies in China, this study finds short-term contrarian effects but stronger medium-term momentum returns. Firm size influences strategy effectiveness. Regression analysis confirms a correlation between historical returns and momentum. However, ignoring transaction costs weakens practical applicability.
5) **Wouassom, A. (2016). Momentum and contrarian trading strategies: Implications of risk sharing and informational efficiency of security markets.** Investigating international markets, this study introduces country indices for momentum and contrarian portfolio selection. Findings reveal significant momentum profits after adjusting for macroeconomic risk factors, while contrarian returns lack strong risk-factor correlation. Global investment strategies can challenge weak-form market efficiency.
6) **Hamalainen, J. (2007). Momentum and contrarian strategies: Analyzing profitability and underlying factors.** This thesis examines the profitability of momentum and contrarian strategies, attributing returns to behavioral, risk, and market efficiency factors. Momentum strategies show stronger evidence, while contrarian effects remain controversial. The study challenges weak-form market efficiency, emphasizing historical price prediction.
7) **Haan, J., & Kakes, J. (2010). Momentum or contrarian strategies: Evidence from Dutch institutional investors**. Analyzing Dutch institutional investors (pension funds, life insurance, non-life insurance) over six years, this study finds predominant contrarian behavior. Pension funds and life

insurers stabilize markets with contrarian strategies, while non-life insurers exhibit weaker contrarian tendencies, highlighting risk preferences.

8) **Mehta, R., & Sharma, P. (2016). Persistence of momentum and contrarian styles of investors on the Indian bourse.** Examining 700 continuously traded NSE stocks (1999–2014), this study finds short-term contrarian profitability (3 months) but strong momentum effects for 6–24 months. Cumulative abnormal returns confirm the persistence of both strategies across different time horizons.
9) **Nnadi, M., & Tanna, S. (2017). Accounting analyses of momentum and contrarian strategies across BRICS markets.** Analyzing 3,340 firms across BRICS markets, this study finds varying strategy effectiveness. China exhibits short-term contrarian and long-term momentum effects, Brazil favors momentum, and South Africa shows weak contrarian profits. India demonstrates strong momentum returns. Russia lacks clear effects.
10) **Bernard, J., & Deo, M. (2015). An analysis of momentum strategies in Indian stock returns.** Focusing on BSE 100 blue-chip stocks, this study examines price and volume momentum. Winner stocks drive momentum profits, but no correlation exists between trading volumes and momentum returns. Findings confirm price momentum effectiveness but challenge volume-based momentum strategies.

RESEARCH METHODOLOGY

Data Sources and Sample Selection

This study employs a comprehensive dataset comprising nine key BSE sectoral indices: Communications, Consumer Non-cyclical, Basic Materials, Technology, Industrial, Consumer Cyclical, Financial, Energy, and Utilities. The primary data source is the Bombay Stock Exchange (BSE) sector research database, which provides standardized performance metrics across multiple time horizons. The dataset encompasses 154 stocks in the Financial sector, representing the largest sectoral component, with varying representation across other sectors. The temporal scope of analysis spans one-year, five-year, and ten-year periods, enabling short-term tactical and long-term strategic performance assessment.

Variables

- **Ind Sector**: The industry sector classification for each observation.
- **%TR 1Y**: The one-year total return expressed as a percentage.
- **5-Year Annualized Total Return – Current**: The compound annual growth rate computed over five years.
- **10-Year Annualized Total Return – Last Month End**: The compound annual growth rate calculated over ten years as of the last month's end.

ANALYSIS AND INTREPRETATION

Descriptive Analysis

A snapshot of sectoral distribution in our dataset reveals that the Financial sector dominates with 154 stocks (42%), followed by the Consumer Non-Cyclical sector with 101 stocks (28%). Industrial stocks account for 39 companies (11%), while other sectors such as Basic Materials, Communication, Energy, Technology, and Utilities have relatively smaller representations.

Table 1: Industry Snapshot

Sector	Count
Financial	154
Consumer (Non-Cyclical)	101
Industrial	39
Consumer (Cyclical)	11
Basic Material	17
Communication	2
Energy	11
Technology	6
Utilities	14

Key Performance Metrics

Analysis reveals that the average 1-Year Total Return across all sectors stands at approximately 4.45%, while the 5-Year Annualized Return reaches nearly 30%. However, high standard deviations (σ=33.53% and σ=27.06%, respectively) indicate significant variability across sectors and individual stocks.

Sector-wise, Consumer Non-Cyclical stocks outperformed with an average 1-year return of 20.17%, whereas Utilities (-10.20%) and Financial stocks (-4.76%) underperformed. The Industrial sector showed the highest 5-Year Annualized Return (47.78%), while Technology had the lowest long-term return at 21.55%.

Table 2: Sector Performance Summary

Sector	%TR 1Y	5Y Annualized Return	Beta	P/E	P/B
Financial	-4.76	24.58	1.06	25.2	3.11
Consumer (Non-Cyclical)	20.17	28.83	0.93	66.09	8.04
Industrials	4.95	47.78	1.14	70.83	10.32
Basic Materials	10.02	36.07	1.11	33.16	3.05
Utilities	-10.2	36.71	1.15	35.77	5.83
Consumer (Cyclical)	-2.05	28.96	1.07	39.11	4.16
Energy	-5.87	32.12	1.14	12.39	3.22
Technology	9.22	21.55	0.97	185.32	8.28
Communication	35.94	28.06	0.85	279.81	9.39

Momentum and Contrarian Portfolio Strategies

Momentum Strategy

Momentum investing involves selecting stocks that have demonstrated strong recent performance. The Momentum Portfolio, comprising the top 20% of stocks based on 1-year returns, yielded a substantial 5-

year average annualized return of 48.80%. The portfolio is heavily concentrated in the Consumer Non-Cyclical and Industrial sectors.

Table 3: Momentum Portfolio Performance

Metric	Value
Count	55
Mean Return	48.80%
Std Dev	38.36%
Min	-21.55%
Max	188.28%

Contrarian Strategy

The Contrarian Portfolio, consisting of the bottom 20% of stocks by 1-year performance, exhibited an average 5-year annualized return of 23.58%. The Financial sector represented 75% of this portfolio, indicating a potential for value opportunities in this space.

Table 4: Contrarian Portfolio Performance

Metric	Value
Count	54
Mean Return	23.58%
Std Dev	21.72%
Min	-23.08%
Max	95.89%

Regression Analysis: 1-Year vs. 5-Year Returns

A regression analysis quantifies the relationship between short-term and long-term returns. The results suggest a statistically significant positive correlation (coefficient: 0.2519, $p < 0.001$). This implies that stocks with strong 1-year returns tend to continue performing well over 5 years, supporting momentum-based strategies.

Sector-Level Observations

- **Industrials:** Highest 5-year returns (47.78%) but moderate 1-year performance.
- **Technology:** Low long-term returns (21.55%) despite premium valuations (P/E 185.32).
- **Financials:** Underperformance in both 1-year and 5-year returns, but relatively low valuations suggest potential long-term upside.

Discussion and Conclusion

Investment Implications

1. **Momentum Strategy Viability:** The strong persistence of returns validates a momentum-based approach in the Indian market.

2. **Sector Rotation Strategy:** High-performing sectors, such as Industrials and Consumer Non-Cyclicals, should be considered for strategic allocation.
3. **Contrarian Opportunities:** The Financial sector, despite its recent underperformance, could present long-term value investment opportunities.

Limitations

- The analysis does not adjust for macroeconomic factors (GDP growth, interest rates).
- Liquidity differentials across stocks were not considered.
- Further risk-adjusted return metrics (Sharpe, Treynor) should be explored.

Future Research Directions

- **Factor-based analysis:** Decomposing returns into market, size, value, and quality factors.
- **Global Comparisons:** Benchmarking BSE sector performance against international indices.
- **Regulatory Impact Analysis:** Studying policy changes affecting sector performance.

CONCLUSION

Our findings reveal a **strong momentum effect** in the Indian stock market. The top 20% of stocks based on **1-year returns (momentum portfolio) generated a 5-year annualized return of 48.8%**, while the bottom 20% (contrarian portfolio) averaged **23.58%**. The significant correlation between short- and long-term returns supports momentum investing, suggesting that past winners tend to continue outperforming. However, **contrarian strategies appear more effective during market downturns**, aligning with research suggesting their success in volatile or crisis periods.

Sectoral Insights and Investment Implications

The study highlights notable sectoral performance divergences:

- **Consumer Non-Cyclical and Communications** sectors outperformed, indicating strong potential in defensive and technology-driven stocks.
- **Financial and Utilities** sectors underperformed, pointing to structural or valuation concerns.
- **Technology and Communications** stocks trade at high P/E ratios, reflecting investor confidence in growth, while **Energy and Financial** stocks appear undervalued, offering potential contrarian opportunities.

These findings emphasize the **importance of sector allocation** in momentum and contrarian investing. Momentum strategies may be best applied to **high-growth sectors**, whereas contrarian investors may find opportunities in **undervalued but fundamentally strong industries**.

Behavioral Finance and Market Efficiency

Behavioral finance factors, including **herding behavior, overreaction, and recency bias**, influence momentum and contrarian returns. Investors tend to chase trends in **bull markets**, strengthening momentum effects, while contrarian opportunities emerge in **market corrections**. This challenges the **Efficient Market Hypothesis (EMH)** and aligns with the **Adaptive Market Hypothesis (AMH)**, which suggests that **market efficiency evolves over time based on investor behavior and external conditions**.

Limitations and Future Research

Despite valuable insights, the study has certain limitations:

1. **Macroeconomic Factors** such as GDP growth, inflation, and interest rates were not explicitly considered.
2. **Risk-Adjusted Metrics** like Sharpe and Treynor ratios were not included, limiting the risk-return evaluation.

3. **Liquidity & Transaction Costs** were not accounted for, which may impact real-world strategy implementation.

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