Persistence of Momentum and Contrarian Styles of Investors on Indian Bourse

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The subsistence of anomalous behavior of equity shares on the basis of assorted investment styles have motivated to conduct the present study and it has taken a sample of 700 stocks listed on National Stock Exchange of India. In order to uncover the persistence of momentum (contrarian) style of investors, different holding period returns are calculated under various market scenarios. The findings of the study will have relevance for all investors across the world that has an interest in Indian equity market.

Keywords: Abnormal Returns, Momentum/Contrarian, Style Investment, Investment Strategy, Winner/Loser Portfolio

1. Introduction

Financial economists have acknowledged a number of firm-level characters that are linked with excess returns. Two dynamically conversed characters embrace value and momentum. Fama and French (1992) and Lakonishok, Shleifer and Vishny (1994) uncovered proof of a value effect; i.e., high book-to-market stocks have a tendency to contain superior average returns when compared to low book-to-market stocks. Jegadeesh and Titman (1993, 2001) talk about momentum effect; i.e., stocks with high past returns beyond the previous six-twelve months outperform stocks with small past returns. In finance, momentum denotes the observed propensity for rising asset prices to augment further, and declining prices to keep lessening. Momentum is used to exemplify characteristically short-term, stock price series persistence, in which prices tend to move in the same direction over definite time horizons of 3 to 12 months. The anomalous/irregular outlines in the stock prices were started documented in 1970s and in 1980s; the researchers started discussions concerning various forms of stock market efficiency. The investors always see at stock market for major abnormal returns which are difficult to obtain from traditional investment opportunities like bank deposits or port office saving schemes. In the earlier studies by Jegadeesh (1990) and Lehmann (1990), evidences were obtained for short term reversals in stock prices. Their study documented that the stocks that yield positive returns in recent past (a week or a month) of trading were giving significant above average returns in their future. But their study explained the reason of such behavior is lack of liquidity and short term price movement of the stocks, not the overreaction of the investors. Lo and MacKinlay (1990) confirmed the existence of results given by the Jegadeesh (1990) and Lehmann (1990) that abnormal returns were the results of the overdue reaction of the stock to other factors and it was not the overreaction which caused the abnormal returns. Further Jegadeesh and Titman (1991) continued these interpretations by providing evidences of the relationship between short term reversals and bid-ask spread. In their study authors have argued that despite the significance of the momentum strategies most mutual fund managers still used old strategies i.e. they invested in such stocks that performed well in the past quarter. In general, investors apply an array of investment strategies and techniques by selecting their own apt interest of different time horizons, some possibly focused on short term gain while others may be fascinated by long term investment alternatives.

Recent analysis and research in the areas of stock market efficiency reveal that stock market returns are predictable in some degree and this is adjacent to the well-established concept of efficient market hypothesis (EMH). EMH has been one of the most superseding themes in the financial market research which achieved extensive attention of financial economists in the area of stock market efficiency. But now the concept of EMH is being critically questioned and this is mainly due to the accumulating evidences on the reversal behavior of stock prices. The weak form of EMH states that abnormal returns cannot be earned by considering historical data based investment strategies. Investors can just earn more return by taking more risk. Nevertheless, near zero beta portfolios have been formed to earn abnormal return much higher than risk free rate of return. So momentum profits works as anomaly in the markets and provides fund managers an opportunity to form beta neutral and superior return portfolios. In last two decades investment strategies have gained attention from the academician world over. One evident study in this regard is done by Jegadeesh and Titman (1993). This study gave facts of momentum effect in stock prices that generate an opportunity for investors to make momentous profits by buying past winner stocks and selling past loser stocks. This recommends that, there subsists some
certainty in the stock market and therefore this contravene the weak form of market efficiency. In the search for an explanation for the profitability of momentum strategies and other anomalies, the literature has not come to a consensus. Consequently, different models came into being to parallel new finance known as Behavioural Finance. Many professional fund management companies in US have effectively employed momentum investment strategy and initiated momentum based fund schemes.

2. Literature Review

Many practitioners and academicians have found that by adopting some simple strategies based on past cross-sectional stock returns investors can earn significant abnormal returns. One of these strategies is momentum portfolio strategy, in which investors can earn abnormal return in medium term of three to twelve months, if they have long positions in past best performing stocks (winners) and short position in past worst performing stocks (losers). Opposite to this strategy, a systematic reversal effect is found when a longer holding period of more than three years is considered and reversing the momentum strategy (buying past losers and selling past winners which are known as contrarian strategy) results in profits. Likewise, there are other strategies of investment as value, growth etc. When a new anomaly is documented in the stock market a major concern always grow in the literature. The reason for these concerns occurs because there is no clear explanation as to why momentum returns present greater returns than a largely diversified portfolio. In other words, why some investors are able to make greater returns than the market returns by applying predefined investment strategies. Unfortunately, numerous of these return regularities be inclined to follow a sort of Murphy's Law (Dimson & Marsh, 1999): once exposed, they swiftly vanish. Perhaps due to investors’ knowledge from research publications or arbitrage conditions continuously improving, the performance of anomalies obviously gets worse (Schwert, 2003; Chordia et al., 2001). As a result, the reliability of these strategies frequently cannot be established in out-of-sample studies.

Important and empirical findings are originally reported in two articles by De Bondt and Thaler (1985) and Jegadeesh and Titman (1993). After these finding, a decisive considerate of these twin anomalies has become more urgent and academicians took two main directions related to these anomalies to the EMH. De Bondt and Thaler (1985) studied long term return reversals in the US stock market and interpreted their outcome as a result of irrational behavior of investors. They pointed out the failure of EMH and documented that investors can earn abnormal profits in the stock market by transecting on the basis of past stock prices using contrarian strategy. They recognized this phenomenon (long term reversal) to the presence of Overreaction Effect in the stock market. In a following study in 1987, De Bondt and Thaler examined the risk and size characteristics of the winning or losing firms and concluded that neither risk nor size had any role to play in explaining the momentum strategy. Likewise, Jegadeesh and Titman (1993) studied the impact of short term momentum effect on the stock markets. They calculated returns from the two stock markets of US: NYSE and AMEX and collected returns for a period 1965-1989. They documented momentum strategies in which a system of investing in portfolios of shares in a manner that is more profitable than holding a largely diversified portfolio of shares involving no additional risk. They adopted strategy in which they bought such stocks that performed very well in the past and sold those stocks that performed worst in the past. They reached to a conclusion that if such stocks were held for the period of three to twelve months, they produced positive returns. Nevertheless, they found that profitability is not the result of systematic risk but it was due to response of stock prices to ordinary factors. In 1999 Schiereck, DeBondt and Weber have examined on a larger sample of stocks and their paper shows that the profitability of momentum strategy is significantly related on the duration of the ranking period. Schmitz et al. (1994-1995) exposed the existence of momentum strategy in market regarding Canadian stocks data for the duration of 1978-1993 and this study presents yet stronger results of the momentum strategy.

Rouwenhorst (1998) conducted a study on European markets and concluded that the momentum profits documented by the Jegadeesh and Titman for the US market were true for the European markets too. Daniel, Hirshleifer and Subrahmanyam (1998) endorsed the momentum phenomenon to two biases of informed investors- overconfidence and biased self-attribute. Here, overconfidence persuades investors to have an inflated outlook on the accuracy of their secretive signals about a stock’s value, leading them to react excessively to such signals. Whereas, biased self-attribution causes well-informed investors to underrate public signals about value, particularly when the public signals oppose their secretive signals. But this overreaction last for short run only. In a study conducted by Chui, Titman and Wei (2000) momentum strategy were found true in the Asian markets too with the exception of Japan and Korea. Griffin, J, and Martin (2002) performed study on momentum on forty (40) stock exchanges which belong to Africa, America, Asia and Europe. Their research validated that momentum effect is present in approximately all stock exchanges from around the world but in various countries it is weak and in some countries it is strong. Fama and French (1996) and Grundy and Martin (2001) examined this argument using the three factor model developed by Fama and French but interestingly they found the presence of momentum even after exerting control on expected return. Jegadeesh and Titman (2001) rejected the approach of usage of model in determining expected return but they took an assumption that returns were different across different stocks. But, there was one similarity between returns from standard asset
pricing model and returns from short-term momentum effect i.e. returns from both sources did not hold the quality of time variation.

The success of both contrarian and momentum strategies are not limited to US stock market, rather it was experienced to work in other international markets too. Baytas and Cakici (1999) documented strong evidence in favor of overreaction outcome for five developed markets (stock markets of United Kingdom, Italy, France, Germany and Japan). Likewise, for Spanish stock market by Alonso and Rubio (1990), for German stock market by Stock (1990), for United Kingdom by Campbell and Limmack (1997), for New Zealand Stock Exchange by Swallow and Fox (1998) established the incidence of overreaction Effect. To the extent that Asian stock markets are concerned, Tripathi and Aggarwal (2009) for Indian Stock Market and Fung (1999) for Hong Kong Stock Exchange documented results in support of Overreaction Effect. Rouwenhorst (1998, 1999) documented momentum patterns for Emerging and European stock markets and concluded that momentum profit was not restricted to US stock market only. Dhandkar and Maheshwari (2013) studied sources of momentum and contrarian profits and proposed a behavioral model that explained various market anomalies and behaviour from various psychological biases. Maheshwari (2013) also worked in this direction and studied various models to give one to forecast and elucidate market anomalies and investors’ behavior affected by various psychological biases.

Naughton, Truong and Veeraraghavan (2008) documented a substantial momentum profits during the period 1995 to 2005. They found significant momentum profits in the Chinese A-shares market by using different period combinations. More recently, Leippold and Lohre (2011) concluded the momentum effect in US market. Joshipura (2011) investigated the National Stock Exchange (NSE) in India between 200-2009 and reported consistent results to Jegadeesh and Titman (1993) that there was significant momentum return evident for the post-formation period ranging between three to twelve months based upon the CRSP US stock data. Follice, B & Langer, T. (2015) studied momentum investment strategy by using data of New York Stock Exchange from July 1991 to December 2010. They found that increasing the trading frequency initially increases risk-adjusted returns of portfolios up to an optimal point and after that point transaction cost play role in returns. Likewise, Asness et al. (2013) recognised momentum effect for different assets classes. In addition, this approach has worked well for above two centuries. Whereas Chabot et al. (2008) confirmed momentum strategy profitable even in the Victorian age; Geczy and Samenow (2015) have made a splendid research endeavor to reveal that momentum has been there in the US equity market since 1800.

Taking into consideration a variety of evidences discussed above, the momentum and contrarian strategies have been established a noteworthy investment style of the investment managers across the world markets. Therefore there is a need to examine this anomalous pattern in Indian equity market too. The present study is destined to study the market efficiency of Indian stock market through momentum and contrarian style investment strategy of investors. In particular, the present study has examined the momentum and contrarian strategies of investors.

3. Research Methodology and Data

The study under consideration is destined to examine the persistence and consistency of momentum and contrarian investment strategies on Indian stock market. For this, 658 stocks listed on National Stock Exchange of India having a historical data from July 1999 to June 2015 are considered. The initial study was focused on more than 800 stocks but only 658 stocks were found eligible for final empirical analysis due to availability of historical data for the study period. The daily adjusted closing prices of the stocks were taken and converted into logarithmic returns. Further, S&P CNX Nifty Index is considered as market benchmark and to calculated abnormal returns. DeBondt and Thaler (1985) and Jagadeesh and Titman (1993) have suggested use of market adjusted residual returns for the analysis of results. The S&P CNX index symbolizes about 95.7% of free-float market capitalization of equity stocks listed on National Stock Exchange (NSE). Hence the components of S&P CNX 500 are measured to be superior market proxy for Indian bourse. The monthly data of S&P CNX 500 components was attained from Capitaline database. The criterion for inclusion of a stock in the present study is that stock must be traded continuously (at least once) for 12 months prior to the formation period. The final sample consisted to 658 stocks (considering above criterion and index switching of stocks).

Then the stocks were classified into winners and losers groups. The stocks which presented the most positive residual returns were grouped into winners stock and stocks performing least i.e. having negative residual returns were grouped into losers stock. For this, all stocks were categorized into ten percentile portfolios. The winner portfolio consisted of stocks in first percentile, i.e., P1 and loser portfolio consisted to stocks in tenth percentile, i.e., P10. To calculate the residual returns, S&P CNX Nifty was used to calculate market-adjusted returns. The initial portfolio construction was done on June 1999; the 12 months holding-period returns were used to calculate residual returns. The stocks which performed extreme positive or extreme negative returns were grouped into two portfolios and the stocks having extreme positive residual returns for 12 months holding period were grouped in winner portfolio and stocks having extreme negative residual returns for 12 months holding period were grouped in loser portfolio. The present study has taken monthly, 3-months, 9-months, 12-
months and 24-months holding period to construct the portfolios. The formation of portfolios was done on June 1999. First of all monthly returns on stocks were calculated by using following formula.

\[
\frac{MCP_t - MCP_{t-1}}{MCP_{t-1}}
\]

Where, MCP is the monthly closing prices of stocks. Afterward cumulative market adjusted returns were calculated as under.

\[
CU_j = \sum_{t=1}^{6} R_{jt} - R_{Mt}
\]

Where \( CU_j \) = cumulative market-adjusted return on the stock \( j \), \( R_{jt} \) = the return on the stock \( j \) for the month \( t \), \( R_{Mt} \) = the market-index returns. S&P CNX Nifty has been used as a market proxy to calculated market adjusted returns.

The above equation has used simply cumulated AR through time. But in order to avoid bid-ask bias effect, the present study has taken buy and holding period returns for various time periods. For this, the following equation has been used.

\[
CU_j^{bias} = \left[ \prod_{t=1}^{6} (1 + R_{jt}) - 1 \right] - \left[ \prod_{t=1}^{6} (1 + R_{Mt}) - 1 \right]
\]

After this, the stocks were classified into winner (W) and loser (L) Portfolios. The final data was left for 658 companies considering various constraints (viz., consistency of data for past 12 months before 1999, switching of some companies into index etc.). The top 66 stocks were included in winner portfolio and lowest 66 stocks were included in loser portfolio. Subsequently CAR for both the portfolios, i.e., Winner and Loser is calculated for monthly, 3-months, 9-months, 12-months and 24-months holding period by using the following formula.

\[
CAR_{Mt}^{bias} = \frac{1}{n} \sum_{j=1}^{n} \left[ \prod_{t=1}^{6} (1 + R_{jt}) - 1 \right] - \left[ \prod_{t=1}^{6} (1 + R_{Mt}) - 1 \right]
\]

(For \( t = 1, 3, 6, 9, 12, 24 \) and \( p = W \) and \( L \), i.e., Winner and Loser and \( \prod \) sign multiplies all the numbers given as arguments and returns the product)

**Empirical Analysis**

Table 1 has shown the results of descriptive statistics for different portfolios across various holding period returns. The monthly, 3-months, 6-months, 9-months and 12-months holding period can be considered as a short term momentum and contrarian strategy and 24-months holding period analysis will help to understand the long term performance of momentum and contrarian strategies. As mentioned in Table 1 below, the winner portfolios or momentum strategists have obtained higher mean returns than the contrarian strategies for all holding period strategies. Longer the holding period, higher is the mean return in case of both winner and loser portfolios. Among various holding period return strategies, 24-months holding period has resulted in highest mean return with highest volatility too. Similar to this, in case of loser portfolios, when the returns are calculated on the basis of monthly returns, the mean returns are lowest. Further, Jarque-Bera statistic has reported the non-normal distribution of winner and loser portfolios for all holding period returns considered in the study. Figure 1 to figure 6 have show the distribution of returns.

**Table 1** Descriptive Statistics of Winner and Loser Portfolios for Different Holding Periods

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Std. Dev.</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Jarque-Bera</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Winner Portfolios</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Monthly Returns</td>
<td>0.011</td>
<td>0.013</td>
<td>0.634</td>
<td>-0.449</td>
<td>0.107</td>
<td>0.133</td>
<td>5.996</td>
<td>601.344</td>
<td>0.000</td>
</tr>
<tr>
<td>3 Months Holding Period Returns</td>
<td>0.037</td>
<td>0.022</td>
<td>0.997</td>
<td>-0.639</td>
<td>0.207</td>
<td>0.555</td>
<td>5.063</td>
<td>364.865</td>
<td>0.000</td>
</tr>
<tr>
<td>6 Months Holding Period Returns</td>
<td>0.082</td>
<td>0.053</td>
<td>1.403</td>
<td>-0.711</td>
<td>0.324</td>
<td>0.540</td>
<td>3.705</td>
<td>110.645</td>
<td>0.000</td>
</tr>
<tr>
<td>9 Months Holding Period Returns</td>
<td>0.129</td>
<td>0.056</td>
<td>2.293</td>
<td>-0.764</td>
<td>0.424</td>
<td>0.655</td>
<td>3.514</td>
<td>131.714</td>
<td>0.000</td>
</tr>
<tr>
<td>12 Months Holding</td>
<td>0.174</td>
<td>0.071</td>
<td>2.128</td>
<td>-0.830</td>
<td>0.504</td>
<td>0.602</td>
<td>2.841</td>
<td>97.964</td>
<td>0.000</td>
</tr>
<tr>
<td>Period Returns</td>
<td>Monthly Returns</td>
<td>3 Months Holding Period Returns</td>
<td>6 Months Holding Period Returns</td>
<td>9 Months Holding Period Returns</td>
<td>12 Months Holding Period Returns</td>
<td>24 Months Holding Period Returns</td>
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<tr>
<td>24 Months Holding Period Returns</td>
<td>0.350 0.103</td>
<td>-0.783</td>
<td>0.839</td>
<td>1.164</td>
<td>4.191</td>
<td>454.273</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Loser Portfolios

<table>
<thead>
<tr>
<th>Monthly Returns</th>
<th>0.008 0.013</th>
<th>0.407</th>
<th>-0.439</th>
<th>0.100</th>
<th>-0.197</th>
<th>5.408</th>
<th>360.583</th>
<th>0.000</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Months Holding Period Returns</td>
<td>0.026 0.023</td>
<td>0.770</td>
<td>-0.622</td>
<td>0.193</td>
<td>0.370</td>
<td>4.645</td>
<td>197.083</td>
<td>0.000</td>
</tr>
<tr>
<td>6 Months Holding Period Returns</td>
<td>0.060 0.035</td>
<td>1.180</td>
<td>-0.693</td>
<td>0.303</td>
<td>0.485</td>
<td>3.689</td>
<td>85.802</td>
<td>0.000</td>
</tr>
<tr>
<td>9 Months Holding Period Returns</td>
<td>0.094 0.015</td>
<td>1.788</td>
<td>-0.746</td>
<td>0.396</td>
<td>0.666</td>
<td>3.516</td>
<td>123.681</td>
<td>0.000</td>
</tr>
<tr>
<td>12 Months Holding Period Returns</td>
<td>0.123 0.026</td>
<td>1.986</td>
<td>-0.803</td>
<td>0.461</td>
<td>0.682</td>
<td>3.303</td>
<td>118.275</td>
<td>0.000</td>
</tr>
<tr>
<td>24 Months Holding Period Returns</td>
<td>0.207 0.044</td>
<td>3.197</td>
<td>-0.766</td>
<td>0.675</td>
<td>1.205</td>
<td>4.178</td>
<td>436.085</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Source: Calculations done by Authors

Figure 1

Figure 2
Figure 3

6-months returns

Figure 4

9-months returns

Figure 5

12-months returns
Before making a comparative analysis of momentum and contrarian strategies, a basic analysis of overall performance of momentum and contrarian strategies over 15 years of study under consideration has been made in Table 2. A simple, one sample t-test is used to examine the performance of winner and loser portfolios with different time period holding strategies. As mentioned in the Table 2 below, all winner portfolios under different holding period have shown significantly higher returns. The t-coefficient of all winner portfolios is found positive and significant indicating that for all short term and long term momentum strategies, there is significant positive return during the study period under consideration. Similar findings are also obtained in the case of contrarian portfolios. Although these are the looser stocks, but in the long duration the looser portfolios have also performed significantly better than their mean returns. These evidences can be verified through probability of t-coefficients of loser portfolios.

Table 2 Results of One Sample T-test to Study Performance of Momentum and Contrarian Portfolios

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>t-coefficient</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Winner Portfolios</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly Returns</td>
<td>9.49</td>
<td>4.94</td>
<td>0.13</td>
<td>74.34</td>
<td>0.00</td>
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<tr>
<td>3 Months Holding Period Returns</td>
<td>30.40</td>
<td>16.52</td>
<td>0.43</td>
<td>71.17</td>
<td>0.00</td>
</tr>
<tr>
<td>6 Months Holding Period Returns</td>
<td>67.27</td>
<td>36.81</td>
<td>0.95</td>
<td>70.62</td>
<td>0.00</td>
</tr>
<tr>
<td>9 Months Holding Period Returns</td>
<td>104.36</td>
<td>57.81</td>
<td>1.50</td>
<td>69.69</td>
<td>0.00</td>
</tr>
<tr>
<td>12 Months Holding Period Returns</td>
<td>138.52</td>
<td>78.51</td>
<td>2.04</td>
<td>68.03</td>
<td>0.00</td>
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<tr>
<td>24 Months Holding Period Returns</td>
<td>286.08</td>
<td>163.51</td>
<td>4.24</td>
<td>67.47</td>
<td>0.00</td>
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<tr>
<td><strong>Loser Portfolios</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Monthly Returns</td>
<td>6.67</td>
<td>3.09</td>
<td>0.08</td>
<td>83.43</td>
<td>0.00</td>
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<tr>
<td>3 Months Holding Period Returns</td>
<td>22.85</td>
<td>10.54</td>
<td>0.27</td>
<td>83.75</td>
<td>0.00</td>
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<tr>
<td>6 Months Holding Period Returns</td>
<td>51.52</td>
<td>24.37</td>
<td>0.63</td>
<td>81.60</td>
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<tr>
<td>9 Months Holding Period Returns</td>
<td>80.15</td>
<td>38.15</td>
<td>0.99</td>
<td>81.01</td>
<td>0.00</td>
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<tr>
<td>12 Months Holding Period Returns</td>
<td>104.27</td>
<td>50.49</td>
<td>1.31</td>
<td>79.62</td>
<td>0.00</td>
</tr>
<tr>
<td>24 Months Holding Period Returns</td>
<td>190.84</td>
<td>85.20</td>
<td>2.22</td>
<td>86.02</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Source: Calculations done by Authors

Additionally, Table 3 and Table 4 have shown the results of significance of difference in the mean returns of winner and lower portfolios. Table 3 has shown the evidences based on Average Abnormal returns while Table 4 has shown the results based on Cumulative Average Abnormal Returns. The findings reported in Table 3 have indicated that a momentum strategy based on monthly or 3-months holding period return does not give significantly higher returns than the contrarian portfolios. While a 6-months holding period, 9-months holding period, 12-months holding period and 24-months holding period momentum strategy results in significantly (5% level of significance) higher returns than the contrarian strategy.
The results mentioned above are further verified by analysis based on cumulative average abnormal returns (CAAR) mentioned in Table 4 below. The results obtained through CAAR have also supported that winner portfolios always perform significantly higher than the loser portfolios under different holding period return strategies. Hence, by adopting momentum as a style of investment may result in significantly higher returns to investors.

Table 4 Results of Paired Sample T-Test on the Basis of CAAR

<table>
<thead>
<tr>
<th>Monthly Returns</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>t-coefficient</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly Returns</td>
<td>Winner-Loser</td>
<td>2.808</td>
<td>2.040</td>
<td>0.053</td>
<td>53.22</td>
</tr>
<tr>
<td>3 Months Holding Period Returns</td>
<td>Winner-Loser</td>
<td>7.505</td>
<td>6.519</td>
<td>0.169</td>
<td>44.48</td>
</tr>
<tr>
<td>6 Months Holding Period Returns</td>
<td>Winner-Loser</td>
<td>15.655</td>
<td>13.451</td>
<td>0.348</td>
<td>44.93</td>
</tr>
<tr>
<td>9 Months Holding Period Returns</td>
<td>Winner-Loser</td>
<td>24.059</td>
<td>21.208</td>
<td>0.550</td>
<td>43.75</td>
</tr>
<tr>
<td>12 Months Holding Period Returns</td>
<td>Winner-Loser</td>
<td>34.175</td>
<td>30.178</td>
<td>0.783</td>
<td>43.65</td>
</tr>
<tr>
<td>24 Months Holding Period Returns</td>
<td>Winner-Loser</td>
<td>93.599</td>
<td>83.552</td>
<td>2.176</td>
<td>43.02</td>
</tr>
</tbody>
</table>

Source: Calculations Done by Authors

4. Conclusion and Implication

Stock market literature portrayed a well-known and widely accepted hypothesis that movement in stock prices follows a random walk and prices forever reflects the correct worth i.e. factual fundamental value. Though, opposing to the argument of the hypothesis, an enormous agreement of facts has been revealed that future prices are predictable. Fama and French (1992) and Lakonishok, Shleifer and Vishny (1994) uncovered proof of a value effect; i.e., high book-to-market stocks have a tendency to contain superior average returns when compared to low book-to-market stocks. Jegadeesh and Titman (1993, 2001) talked about momentum effect. The momentum and contrarian strategies have been established a noteworthy investment style of the investment managers across the world markets. The present study has studies the market efficiency of Indian stock market through momentum and contrarian style investment strategy of investors. In particular, the present study has examined the momentum and contrarian strategies of investors. The academic literature has recognized numerous stock characteristics that are linked with major excess returns. In present study, we discover how these firm-level characteristics should be optimally pooled to outline portfolios, with a specific focus on momentum and contrarian strategies. One of the attractive findings from the pragmatic work is that various well-known anomalies in the finance literature do not adhere to in different sample periods. Specifically the size effect and the value effect appear to have vanished after the papers that tinted them were published. At the same time, practitioners initiated investment vehicles that executed the strategies specified by the academic research papers.

The present study may be of curiosity to a variety of stakeholders who are gazing at Indian equity market in an urge to find significantly higher return opportunities. In the present times when the stock markets have become more transparent and efficient, an evidence of prevalent anomaly may be of great concern to both domestic and international investors. Most of the anomalies like, calendar anomalies, value and glamour style of investors have already faded away. Therefore evidences of persistence of momentum and contrarian strategies are very essential to be examined. On one side, it can result into extra ordinary profits to both domestic and international investors by investing in Indian equity markets, and on the other side, it requires a check by the
regulators to see the robustness of Indian equity market. The persistence of momentum effect for a medium to longer duration period may have certain repercussions for the market. The fund managers, investment companies and individual investors may improve return on their investment by opting momentum strategies for longer duration. But then these returns require to be adjusted for the transaction costs and existing taxes to find out the actual benefit to the momentum strategists as the present study has not considered these costs while determining the significance of higher returns through momentum strategies.

5. References

18. Geczy, C., Samonov, M., 2013. 212 years of price momentum (the world’s longest backtest:1801-2012), Octoquant working paper and SSRN # 2292544.