

# An empirical Investigation of existence of Trading Strategy (Momentum or Contrarian) in context of Indian Equities

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## Abstract

*The present study focuses on identifying which of the two strategies namely contrarian or momentum exists in Indian Markets. The selected data for this purpose includes twenty five stocks from the BSE Sensex and period of study is ten year period (2005-2015). Whereas the contrarian strategy would suggest that an investors should buy past losers & sell past winners the momentum strategy recommends the reverse; the purchase of the past winners and the sale of the past losers. To test these strategies in the Indian Market we have used annual portfolio average returns Formation-Holding Methodology 1-1, 1-2, 1-3, 1-4, 1-5, 1-6,1-7,1-8 & 1-9. We have constructed five equal sized quintile portfolios after ranking the stocks in descending order of their returns. The methodology is somewhat similar to one applied in Jegadeesh and Titman (1993) J X K but with a rider in the sense that in our strategy we have fixed the Formation to 2005-06 & allowed the Holding Period to vary annually till 2015. The tests that have been applied in the study are 'Difference of the Means test', Cumulative Average returns & Mean Cumulative Average returns test. The results of our study shows that Momentum strategy works in Indian Markets as MCAR (Winner) >MCAR (Loser), thus reflecting continuation of returns.*

**Keywords:** Contrarian, Momentum, Sensex, Formation-Holding Methodology, MCAR

## INTRODUCTION

The weak form of market efficiency implies that historic prices cannot be used to predict future patterns in prices, thus performance of stocks and portfolios is independent of past returns. However a lot of research in this area shows some autocorrelation in the market prices of stocks and portfolios, especially in the short run (Hon, M. T., & Tonks, I. (2003)). In light of these findings, a lot of trading strategies have been developed, however the two prominent but diagonally opposite are the momentum and contrarian.

The present study focuses on which of the two strategies namely contrarian or momentum exists in Indian Markets. Whereas the first strategy i.e. the contrarian strategy (also called negative feedback strategy) would suggest that an investors should buy past losers (i.e. those stocks or portfolios which have given lowest return during the

relevant period) & sell past winners (those stocks or portfolios which have given highest return). On the other hand the second strategy, the momentum strategy recommends the reverse; the purchase of the past winners and the sale of the past losers (also called positive feedback trading). The momentum strategy actually means that winners in a period (stocks/portfolios giving highest return) continue to outperform & show consistent performance in the subsequent periods. Thus the two strategies simply mean; return continuation and reversal of return. These twin strategies became popular only after these were formally applied to stocks by Jegadeesh and Titman (1993) who developed their J x K strategy for buying the winning and selling the losing Portfolio over different holding periods.

## SCOPE & OBJECTIVE OF THE STUDY

The present study makes an attempt to investigate the two

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strategies namely contrarian or momentum exists in Indian Markets. To achieve this Objective twenty seven stocks forming part of the BSE Sensex have been included and study period goes from April 2005- March 2015 (ten years). The data (closing prices of companies) used in our study has been collected from BSE Website ([www.bseindia.com](http://www.bseindia.com)). The data (closing prices of stocks) has been transformed to log returns by applying formula  $\ln (P_i / P_{i-1})$ .

## REVIEW OF LITERATURE

Bernard, M., & Deo, M. (2015) carried out their study on India's BSE 100 Stock Index for the 8 year period 2004-12. For winners and losers the CAAR and AAR's were estimated. Abnormal return was statistically significant for momentum strategies. Although both winners' and losers' were contributing to momentum portfolios, winners contribution was higher Gupta, K., Locke, S., & Scrimgeour, F. (2010) investigated some of the alternative strategies to calculate momentum returns like 52-week high, industry momentum etc. The sample chosen was also quite substantial involving 51 countries & findings suggest industrial momentum & new strategy: 52-week high momentum returns to be statistically significant when applied in different countries but these results were not superior as compared to conventional strategy. Moreover these results were not so encouraging for small cap stocks. George, T. J., & HWANG, C. Y. (2004) showed how short term momentum in stock returns & long term reversal were completely separate from each other, Their strategy was to take long position in stocks which were close to 52 week high and found that this strategy resulted in identifying winners with more accuracy. They also tried to examine whether 52 week high stocks result in long-term reversals & conclusion was that it was not so. Forner, C., & Marhuenda, J. (2003) made a study of Spanish Market for the momentum strategy which has proved to give positive abnormal returns in short- periods & the contrarian strategy to be effective in long periods. The results did support the momentum but contrarian was with a pinch of salt. Hon, M. T., & Tonks, I. (2003) made a comprehensive study of momentum strategy in UK markets for a period of four decades January 1955 to December 1996. The results could find some evidence of a size effect but was truly not momentum. Only a sub sample could only confirm momentum strategy while this could not be extended to a larger period in UK Markets Sehgal, Sanjay, and I. Balakrishnan (2002) evaluated Indian Stock Markets & found that after controlling for short run momentum, long

term showed a reversal in returns. This would mean weak reversal in long run and strong continuation in short run. A contrarian strategy provides somewhat positive returns in the long run. These results were found to be consistent with the Kang, J., Liu, M. H., & Ni, S. X. (2002) carried out their study in the Chinese Markets & found abnormal profits for some short term both contrarian & momentum strategies. These profits could be attributed to over-reaction to firm-specific information, the negative cross-serial correlation. For equal weighted portfolios, the momentum profits were less distinct than value weighted portfolios, the reason identified was unique lead-lag structure in China. Hameed, A., & Kusnadi, Y. (2002) made a study of return continuation effect in six emerging Asian markets & results showed that for the portfolios created consisting of long positions on past winners, The proportion of positive returns were higher as compared to some of the other studies. Chui, A. C., Wei, K. C., & Titman, S. (2000) examined momentum play in Asian markets & results indicate that momentum strategies (buy past winners & sell past losers) work well in markets except Japan., the momentum effect is stronger for small market cap firms, firms with low B/V & having high turnover. Further independent firms had strong momentum display than firms which were managed in a group. Developed markets. Asness, C. S. (1997) examined in detail value and momentum strategies and found that the two were negatively correlated or Value strategies gave best results among loser stocks while momentum strategy gives strong results among low-value or expensive stocks. The study could actually prove the effectiveness of both momentum and value strategies but both moved in opposite direction. Thus adopting value strategy would mean buying firms with poor momentum and vice versa. Then holding momentum constant leads to a more effective value.

## METHODOLOGY USED

### (a) Formation of Winner and Loser Portfolios

- (i) The Study considers 27 Companies from the BSE Sensex for the entire ten year period (April 2005-March 2015), & computed the natural log returns:  $\ln (P_t / P_{t-1})$  of all the stocks. For the first year i.e. 2005-06, these stocks are ranked in descending order of their returns.
- (ii) Next we form five portfolios from the stocks (however since there are twenty seven stocks in our study, for ease of formation of portfolios each with five stocks, we

ignore the two stocks, one giving highest and one giving lowest returns) The portfolios thus formed are named as Portfolio 1 or P1 which shall be a portfolio of stock returns with highest five ranks (we pick the top five stocks giving highest return as we have ranked according to descending order). Again Portfolio 2 or P2 shall be the portfolio with five stocks getting the lowest returns. Other Portfolios P3, P4 & P5 lie in between these two portfolios.

- (iii) The first year of our study period April 2005-March 2006 is our formation period of our portfolios. In this Formation period (F1), we have portfolios P1(portfolio with stocks giving highest return), P2 (portfolio with stocks with least return), P3, P4 & P5, however for our analysis we focus only on two types of portfolios P1 (also called the Winner Portfolio ) and P2 (also called the Loser Portfolio).

**(b) Computation of Average Returns for Formation and Holding Periods**

- (i) Compute the average return (AR) of P1 (Winning Portfolio) & P2 (losing portfolio) for our formation period (2005-06). This average return shall be simple average return :-  
 $\sum_{i=1}^5 (R_i) / 5$  where  $R_i$  is the return on the stock 'i' of the Portfolio (Winner or Loser)
- (ii) Next we focus on second year (2006-07), we call this period as Holding Period 1. We again compute the average return of same P1 (Winner) & P2 (loser) in similar manner.
- (iii) Next we focus on third year (2007-08), we call this period as Holding Period 2. However average return of holding period 2 or H2 shall be sum of average return of two years i.e. year 2006-07 & 2007-08 divided by 2 (i.e..  $R_{p_{H1}} + R_{p_{H2}} / 2$ ) where  $R_{p_{H1}}$  &  $R_{p_{H2}}$  are the returns on portfolio(p) for the holding period 1&2 respectively.
- (iv) Similarly we compute the average return for holding period(s) H3, H4, H5, H6, H7, H8 & H9. We thus derive the general formula for average return for our portfolio as  $AR(P_{Hi}) = \sum_{i=1}^n (R_{p_{Hi}}) / n$  where  $P_{Hi}$  is the Portfolio during the holding period 'i',  $R_{p_{Hi}}$  is the return of the portfolio during the holding period 'i', 'n' is the no. of years of the holding period.
- (v) The strategy adopted can be written as : 1-1, 1-2, 1-3, 1-4, 1-5, 1-6,1-7, 1-8 & 1-9 where 1-1 would mean one year formation (2005-06) and one year holding (2006-07) and 1-2 would mean one year formation and two

year holding (2006-08). This is a modified version of the J x K strategy by Jegadeesh and Titman (1993) which has been slightly modified by keeping the Formation period fixed throughout and allowed only the Holding period to change from year to year.

- (vi) We apply difference of the mean 't' test to test whether the average return on winning portfolio is statistically different from average return on losing portfolio;

$$t = (\mu_1 - \mu_2) / (\sigma_1^2 / n1 + \sigma_2^2 / n2)$$

**(c) Computation of Cumulative Average Returns (CAR) for Winner & Loser Portfolios**

We compute CAR for winner and loser portfolios separately by applying the following formula

$$CAR_m = \sum_{j=1}^m AR(P_{Hj})$$

('Hj' is the portfolio return during the holding period 'j' & 'm' is the year when cumulation ends)

Let us consider P1 (Winner): suppose we want  $CAR_4$ , we first compute  $CAR_1$  (by taking AR of 1<sup>st</sup> year,) then  $CAR_2$  (by adding the AR for first two years), & so on till we reach

$$CAR_4 \text{ i.e. } CAR_4 = \sum_{j=1}^4 AR(P_{Hj})$$

We Repeat this exercise for P2 (Loser Portfolio)

**(d) Calculation of Mean Cumulative Average Returns (MCAR) for Winner & Loser Portfolios**

MCAR is computed using the following formula, we compute only  $MCAR_9$ , as no. of iterations were 9.

$$MCAR = \sum_{j=1}^m AR(P_{Hj}) / m, \text{ or}$$

$$MCAR_9 = CAR_9 / 9$$

**(e) Data Diagnostic Tests**

- (i) **Stationary tests for our stocks:** We use augmented Dickey Fuller Unit Root Test to test the stationarity of our stock returns. For this purpose we run the following regression:-

$$\Delta Ret Stock_t = \beta_1 + (\beta_2 - 1) Ret Stock_{t-1} + \sum_{i=1}^m \beta_{3i}$$

$$\Delta Ret Stock_{t-i} + \beta_4 t + u_t$$

(For the above equation; the variable for which we are testing stationarity is Return on Stock (we test this for each of the twenty five stocks included in our study).  $\Delta Ret Stock_t$  is change in Stock return in period t,  $(\beta_2 - 1)$  is the coefficient of the Stationarity for variable,  $\sum_{i=1}^m \beta_{3i} \Delta Ret Stock_{t-i}$  denotes change in Stock return in period t-i & is the

augmented variable which has been added to take care of autocorrelation and the term adds up ‘m’ times till the autocorrelation is removed,  $\beta_{i,t}$  is the trend variable and takes care of deterministic trend in the variable so that only stochastic trend can be detected, the  $u_t$  is random error term.)

(ii) **Test for Normality** : We apply Jarque Bera Test Statistics which is given by the following

$$JB = \frac{n}{6} \left( S^2 + \frac{1}{4}(K - 3)^2 \right)$$

(Where ‘S’ is the Skewness & ‘K’ the Kurtosis of time series data, ‘n’ is the no. of Observations. Here too we apply the test to all the 25 stocks included in our study)

### HYPOTHESIS TO BE TESTED UNDER THE STUDY

The following hypothesis are to be tested under the study

**Hypothesis 1:** There is no difference between the average return on Winning Portfolio and Losing Portfolio (i.e.  $H_{01}$ :

$\mu_1$  Winning Portfolio =  $\mu_2$  Losing Portfolio &  $H_{A1}$ :  $\mu_1$  Winning Portfolio  $\neq$   $\mu_2$  Losing Portfolio)

**Hypothesis 2:** Market is Efficient. (i.e.  $H_{02}$ : MCAR Winning Portfolio = MCAR Losing Portfolio &  $H_{A2}$ : MCAR Winning Portfolio  $\neq$  MCAR Losing Portfolio)

**Hypothesis 3:** The stock returns under consideration follow random walk or they are non-stationary.  $H_{03}$   $\beta_2 = 1 = 0$  or  $\beta_2 = 1$  (the stock returns follow a random walk)

$H_{A3}$ :  $\beta_2 \neq 1$ , (stock returns do not follow random walk)

**Hypothesis 4:**  $H_{04}$ : The stock returns are normally distributed

$H_{A4}$ : The stock returns are not normal

### RESULTS AND DISCUSSION

The results of the study are discussed under three segments, the first segment deals with the Statistical Description of the Stock Returns of our sample of twenty five companies taken from BSE Sensex, these results are given in Table 1.

**Table 1 : Descriptive Statistics on Stock Returns for the period April 1, 2005 March 31, 2015**

STATISTICS	AXIS BK	BHARTI	BHEL	CIPLA	DR REDDY	GAIL	HDFC	HDFC Bk	HERO M	HINDALCO	HUL	ICICI BK
Mean	0.007	0.005	-0.010	0.008	0.014	0.005	0.005	0.005	0.014	-0.017	0.016	-0.001
Std.Error	0.018	0.010	0.018	0.011	0.010	0.009	0.015	0.016	0.007	0.022	0.007	0.017
Median	0.037	0.016	0.012	0.022	0.015	0.011	0.014	0.015	0.012	-0.002	0.011	0.007
Std Dev(s)	0.194	0.111	0.195	0.118	0.104	0.103	0.169	0.173	0.080	0.242	0.077	0.188
Sample Var	0.038	0.012	0.038	0.014	0.011	0.011	0.028	0.030	0.006	0.058	0.006	0.035
Kurtosis	38.550	11.098	41.722	37.493	14.672	13.170	63.508	68.810	-0.238	54.719	0.644	37.147
Skewness	-4.829	-2.196	-5.156	-4.672	-2.512	-2.122	-6.880	-7.295	-0.112	-6.136	0.023	-4.528
Range	1.933	0.896	1.932	1.184	0.884	0.883	1.808	1.906	0.406	2.634	0.443	1.971
Count	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0
JB TEST	6728.8	420.8	7961.8	6332.4	800.7	602.2	19092.6	22529.8	52.2	14009.7	27.5	6188.2

STATISTICS	INFOSYS	ITC	LARSEN	LUPIN	M&M	MARUTI	NTPC	ONGC	REL	SBI	SUN PH	TCS	TATA M
Mean	0.001	0.007	0.005	0.011	0.001	0.019	0.005	-0.002	0.004	-0.006	0.006	0.007	0.002
S.E	0.011	0.012	0.016	0.017	0.012	0.010	0.008	0.011	0.013	0.021	0.016	0.010	0.018
Median	0.027	0.015	0.015	0.040	0.012	0.022	-0.003	0.009	0.011	-0.002	0.026	0.015	0.020
Std Dev(s)	0.118	0.132	0.172	0.183	0.129	0.104	0.083	0.124	0.139	0.233	0.171	0.114	0.201
Variance	0.014	0.017	0.030	0.033	0.017	0.011	0.007	0.015	0.019	0.054	0.029	0.013	0.040
Kurtosis	11.647	16.422	16.025	60.861	8.858	0.095	1.388	13.485	9.599	67.447	59.592	12.814	31.791
Skewness	-2.563	-1.113	-2.681	-6.880	-1.548	-0.007	0.235	-2.362	-0.682	-7.135	-6.835	-2.572	-4.341
Range	0.825	1.386	1.578	1.891	1.118	0.507	0.552	1.084	1.302	2.582	1.731	0.918	1.933
Count	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0
JB TEST	501.0	917.8	983.8	17538.7	217.7	41.9	14.0	655.7	225.2	21603.8	16806.3	608.7	4483.8

Apart from discussing various test statistics, table 1 given above also tests for normalcy of the stock returns of various companies using JB test Statistic. The results show that normality of stock returns for the twenty five companies could not be established (we reject the Null Hypothesis of Normality as Computed Value is more than Chi Square Table Value of 5.99 for all our stocks), however this aspect is still not considered a limitation in further analysis of formation of portfolios and computation of Average Return and Cumulative Return.

The next part of this segment show the results of data diagnostic of these stocks in terms of stationarity. These results are given in Table 2 below. As far as stationarity is concerned, all the stock returns (for 25 companies) were found to be stationary at first difference (or Integrated at I (1))

**Table 2 : Testing Stationarity for Stock Returns**

Name of the Company	N	Total df	Coeff $\beta_2 - 1$	SE( $\beta_2 - 1$ )	't' calculated	DICKEY FULLER Table	STATIONARY / NOT STATIONARY
AXIS BANK	119	117	-0.9780201	0.092817	10.5370603	2.89	STATIONARY
BHARTI AIRTEL	119	117	-1.0408391	0.092904	11.20336964	2.89	STATIONARY
BHEL	119	117	-0.9586176	0.092811	10.32870362	2.89	STATIONARY
CIPLA LTD	119	117	-1.0364898	0.09266	11.18596585	2.89	STATIONARY
DR REDDY	119	117	-1.0652292	0.092255	11.5466285	2.89	STATIONARY
GAIL	119	117	-1.1074631	0.092341	11.99317805	2.89	STATIONARY
HDFC	119	117	-1.0482762	0.092734	11.30406202	2.89	STATIONARY
HDFC BANK	119	117	-0.9894807	0.092859	10.65570172	2.89	STATIONARY
HERO MOTO COP.	119	117	-1.1567571	0.09131	12.66849095	2.89	STATIONARY
HINDAL CO.	119	117	-1.0379956	0.092964	11.16559176	2.89	STATIONARY
HUL	119	117	-1.0884146	0.092514	11.76491927	2.89	STATIONARY
ICICI BANK	119	117	-1.0138717	0.092796	10.92585337	2.89	STATIONARY
INFOSYS	119	117	-1.0909509	0.091599	11.91010281	2.89	STATIONARY
ITC	119	117	-1.280551	0.089822	14.25661665	2.89	STATIONARY
LARSEN	119	117	-0.8920793	0.092235	9.67184858	2.89	STATIONARY
LUPIN	119	117	-0.9798906	0.09295	10.5421327	2.89	STATIONARY
M & M	119	117	-0.8904449	0.091693	9.711118691	2.89	STATIONARY
MARUTI SUZUKI	119	117	-0.9940961	0.092326	10.76722214	2.89	STATIONARY
NTPC	119	117	-1.095783	0.092761	11.8129183	2.89	STATIONARY
ONGC	119	117	-1.0340882	0.092439	11.18674616	2.89	STATIONARY
RELIANCE	119	117	-1.1044999	0.092371	11.95718611	2.89	STATIONARY
SBI	119	117	-1.0407245	0.09271	11.22564408	2.89	STATIONARY
SUN PHARMA	119	117	-1.0459271	0.093012	11.24507737	2.89	STATIONARY
TATA CONSULTANCY	119	117	-1.1574205	0.090974	12.72260485	2.89	STATIONARY
TATA MOTORS	119	117	-0.9140872	0.092505	9.881512473	2.89	STATIONARY

The second segment of the result analysis focuses on the results of the difference of the means test for different time periods when returns from winning Portfolio are compared with that of the losing portfolio. These results are given in Table 3 Below

**Table 3 : Difference of the 't' test comparing the average return on winning and losing portfolio**

Particulars	F1 period	F1-H1	F1-H2	F1-H3	F1-H4	F1-H5	F1-H6	F1-H7	F1-H8	F1-H9
$\mu_1$ Winning Portfolio	0.14	0.09	0.11	0.12	0.12	0.12	0.11	0.11	0.11	0.11
$\mu_2$ Losing Portfolio	-0.09	-0.14	-0.17	-0.15	-0.14	-0.14	-0.15	-0.14	-0.13	-0.14
VAR1( $s^2$ )	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
n1	12.00	12.00	24.00	36.00	48.00	60.00	72.00	84.00	96.00	107.00
VAR2( $s^2$ )	0.02	0.01	0.01	0.02	0.01	0.02	0.02	0.02	0.02	0.02
n2	12.00	12.00	24.00	36.00	48.00	60.00	72.00	84.00	96.00	107.00
t' comp (SIG/Not Sig)	SIG	SIG	SIG	SIG	SIG	SIG	SIG	SIG	SIG	SIG

The analysis of the difference of the means test for different time periods as given in Table 3 above clearly shows that computed 't' values for the difference of the means of portfolio returns (MCAR Winning Portfolio - MCAR Losing Portfolio) is statistically significant (higher than table 't' values) (i.e. not equal to zero)

In the final part of our analysis, we concentrate on the results for the computation of CAR and MCAR for our winner and loser portfolios over different holding periods, these results are given in Table 4 below. The results of this segment clearly show that Mean Cumulative Average Returns (MCAR) of Winner Portfolio is higher than Mean Cumulative Average returns (MCAR) of the Loser Portfolio, thereby implying that existing winners continue their winning trend on Indian Markets thereby showing return continuation.

**Table 4 : Average Return & Cumulative Average Return of Winning and Losing Portfolios for the Holding Periods**

**Winning Portfolio (P1)**

	AR	CAR
F1 period	0.139	0.139
F1-H1	0.092	0.092
F1-H2	0.108	0.200
F1-H3	0.117	0.317
F1-H4	0.125	0.442
F1-H5	0.118	0.560
F1-H6	0.114	0.674
F1-H7	0.111	0.785
F1-H8	0.111	0.896
F1-H9	0.112	1.008
MCAR	WINNING PORTFOLIO	0.112

Losing Portfolio (P2)

	AR	CAR
F1 period	-0.089	-0.089
F1-H1	-0.144	-0.144
F1-H2	-0.172	-0.316
F1-H3	-0.150	-0.465
F1-H4	-0.135	-0.600
F1-H5	-0.142	-0.742
F1-H6	-0.148	-0.890
F1-H7	-0.138	-1.028
F1-H8	-0.133	-1.161
F1-H9	-0.138	-1.299
MCAR	LOSING PORTFOLIO	-0.144

Result: MCAR (WINNING PORTFOLIO) >MCAR (LOSING PORTFOLIO)

### CONCLUSION

The study focused on identifying existence of contrarian or momentum in Indian Markets (BSE Sensex) for the period 2005-2015. To test this hypothesis the study has used Formation-Holding Methodology 1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 1-8 & 1-9 by constructing five equal sized quintile portfolios from 25 BSE Sensex stocks (similar to J x K Methodology by Jegadeesh and Titman (1993) but with some modifications). The average portfolio returns of the winning portfolio is compared with losing portfolio by applying 'Difference of the Means test' to know whether the difference is significant. Further Mean Cumulative Average returns test has been applied to find out which strategy exists in Indian Markets. The results of our study shows that Momentum strategy works in Indian Markets as MCAR (Winner) >MCAR (Loser) even for a longer ten year period, thus reflecting anomaly in stock returns. It also shows continuation of returns.

### SCOPE FOR FURTHER RESEARCH

The findings of the study point out that momentum strategy works in the Indian Markets when the period of study is ten years (considered long period). In view of these findings from the present study, there is always some scope of further research in this area, some of which areas we want to highlight (i) The F-H Strategy may be changed to make it monthly return on stocks. Further there is some evidence which shows that momentum strategy works mainly in short to medium term (say 1 month to 12 months). It would not be surprising if by reducing the duration from one year to a lower period say one month or even daily return one gets a

different result. To go a deep further a comparison can be made between the applicability of the twin strategies of momentum and contrarian on Indian Markets with varying durations (one day, one month, one week, one quarter, one year etc) and different time periods (one year, five years, ten years and so on ) Further book value and turnover of Companies/Stocks can be incorporated in these strategies to make the research more elaborate (ii) Also Formation need not be fixed at F-1 but can change after all the Holding Cycles that have been clubbed with F-1 have exhausted. In this case one can move a step ahead for Formation. (iii) The sample can be extended to other countries especially the emerging economies which are close to Indian Economy, this would help us in arriving at a broader conclusion about the existence of these strategies. (iv) The momentum strategy and its impact need not be restricted to stocks, it can be extended to industries whereby above average performance by an industry and below average performance by another is continued or can be momentum achieved through earnings announcement, whether the momentum continues post announcement

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