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Market Efficiency on Trial- A Semi-Strong Form Analysis of BSE

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This study examines the reaction of stock market returns in relation to dividend announcements, using BSE SENSEX company's information. Samples from BSE SENSEX selected 30 companies have been selected for research. The Market Model using Average Abnormal Return (AAR) and Cumulative Average Abnormal Return (CAAR) are tested for the period of from 1ST APRIL 2013 TO 31ST MARCH 2023. Event window of 31 days, 15 days before and 15 days after the announcement is used. Event day is represented by 0. Estimation window is used 120 days before the event window. Findings indicate that AAR shows BSE Sensex index that have been declined. The study concluded that BSE Sensex coefficients are negative and cannot fully reflect the changes on the stock price. Therefore, the BSE SENSEX is not in Semi Strong form efficiency. Finally, BSE SENSEX companies react inefficiently in releasing of information of dividends announcements.

Keywords: Dividend announcements, Event Studies, Semi Strong Form Efficiency, Market Model, AAR, CAAR, and BSE SENSEX 30 Companies.

1. Introduction

The Event studies concept was introduced by Eugene Fama, Fisher, Jensen, and Roll (FFJR) in the year 1969 and they propounded useful evidence on stock market prices respond to information contained in an event relating to particular scrip. Event studies are part of market efficiency and many of the event studies are based on the Semi-strong form method. According to Eugene Fama, the Semi-strong form efficiency means publicly available information. The Public information are called as events. The events may be corporate events such as, divided announcements, Bonus issues, Stock splits and Mergers & Acquisitions and so on. In India, only a few researchers have analysed about the event studies. Each individual test of Semi-strong form efficiency is concerned with the adjustment of security prices to one kind of information generating event. In this study, divided earning announcements are carried out using the Market Model.

The Market model is sometimes called the single index model. The market model says that the return on a security depends on the return on the market portfolio and the extent of the securities responsiveness as measured by Alpha and beta. In addition, the return will also

depend on conditions that are unique to the firm. Graphically, the market model can be depicted as a line fitted to a plot of asset returns against returns on the market portfolio. Saloni Gupta (2010).

The Market efficiency was explained by Eugene Fama in 1969. He defines market efficiency very clearly: "A market in which prices always fully reflect all available information is called efficient". He classified the market efficiency into three types. They are as follows, Weak form efficiency, Semi-strong form efficiency, and the Strong form efficiency. Weak form efficiency shows the past or historical information or of the stock prices. Semi-strong form efficiency shows the publicly available information. (I.e. Companies Dividend announcements, Bonus issues and Stock splits etc.,). and, the strong form efficiency shows the public as well as private information. (Eugene Fama, 1969)

In this study, mainly focusing on the Semi Strong form exists or not. The event window is used to show the before (Pre) dividend announcement and after (Post) the dividend announcement. The Pre and Post dividend announcement of SENSEX companies is fully reflected on the stock price or not. The estimation window of 120 days considers for the alpha, beta and standard error calculation.

For the purpose of analysis, researcher used the coefficient of Average Abnormal Return (AAR) and Cumulative Average Abnormal Return (CAAR). The Abnormal return (AR) calculated from the expected return and actual return. And, also T statistics are carried out from the AAR and CAAR. The over-reaction and under-reaction of AAR & CAAR coefficient values will identify from the graphical form. Hence, the Pre and Post dividend announcements of SENSEX index companies are taken for the study.

2. Review of Literature

Keane, S.M. (1983), explained market efficiency has been classified not only into three different forms namely weak form, semi strong form and strong form but also sub-classified into three degrees namely, perfect efficiency, near efficiency, and inefficiency in each of the forms by Kenae. These degrees can occur in all the three levels of market efficiency. These degrees of efficiency are of practical importance when it comes to carrying our different studies of market efficiency, since it may be difficult to establish whether a market is efficient or inefficient.

Dyckman et al., (1986), examined that the alternative hypothesis is that security markets are not efficient. The primary argument for this hypothesis is based on the (1) inability of investors to interpret new information. (2) Another potential cause of prices failing to reflect information is the incomplete dissemination of information. Further, constraints in the market may also affect prices. (3) Transaction costs in buying and selling securities and restrictions on short sales may inhibit prices from reflecting new information.

Ananthi M and Dinesh S (2019), found that the present study is an attempt to test the efficiency of Indian stock market with respect to a corporate announcement by LIC Housing Finance Limited. The study carried as event study under the Semi Strong Form of market efficiency using Rate of Return, Beta, Excess Return, and Average Excess Return, Pivot Point, and t-statistics as a tool to test market efficiency. Finally, the study concluded that the announcement

of corporate events has made a slight impact on the capital market.

Koustubh Kanti Ray (2021), suggests that the Indian market is efficient in its semi-strong form with respect to bonus issue announcements only. In the overall study it can be concluded that under bonus issue announcements Indian market is efficient, but the efficient market hypothesis are failed prove that Indian market is efficient around rights issues announcements where investors still can make abnormal returns.

Bharath and Shankar (2022), investigated the informational efficiency of the Indian Stock Market in the semi-strong form of efficient market hypothesis with respect to the information content of the event bonus issue announced by companies listed in BSE 500 during the study period. The AARs and CAARs were analysed. The study reveals that the investors have not been able to earn abnormal returns in the study companies.

Vishal Kutchu (2023), tested the semi-strong efficiency of the Indian stock market - Budget 2023 on six select Indexal indices. The results suggest that the Investor should be very cautious while interpreting such reports. But for the rest 68 stocks, their returns in pre-event period and returns in the event period are about the same; therefore we do have evidence to conclude that the Indian stock market is semi-strong efficient.

Remya Ramachandran (2021), examined the efficiency of Indian Stock market by studying stock price and trading volume reaction resultant upon the corporate action information. Hence it can be concluded that the bonus information release will not influence the stock price. The analysis reveals that the information release of dividend, bonus issue, stock split and merger. As regards the informational efficiency of the market, the results of the study suggest that the Indian stock market tends to indicate semi strong form of efficiency.

Udhaya R (2022), tested the Semi strong capital market efficiency with reference to the annual earnings announcement Bombay Stock Exchange, India. The data for the calendar years 2009 to 2013 was analysed and searched for the 30 companies included in the Sensex to identify the stock price reaction to annual results announcements. The event study methodology and announcement window (AD-15 to AD+15) was used. The analysis has shown that the BSE and the Sectors analysed have reflected Semi strong efficiency.

Uma Priyadharshini and Lourthuraj S A (2021), examined the semi-strong form efficiency in FMCG Index and to examine the stock market reaction to dividend announcement, to evaluate the risk of the stocks in particular index and to offer valuable suggestions to the investors to take the right investment decision. These results confirm the theoretical background regarding the impact of the dividend announcement on stock prices. The semi-strong form efficiency therefore is tested and proved.

Mitesh Patel et al., (2022), tested the informational efficiency of the Indian Stock Market in the semi-strong form of efficient market hypothesis with respect to the information content of the event budget announcement of BSE 30 in the year 2016. The AARs, CAARs and T test were analysed. AARs after the announcement day (except +3 day) are statistically not significant. The study reveals that the investors are unable to earn abnormal returns in these companies.

STATEMENT OF THE PROBLEM

Generally, Indian stock market confronts some ups and downs, because of market information reflect in the stock prices. Market efficiency is used to explain the relationship between information and its impact on stock prices in the capital market. The major problem is only a few investors know how to predict the stock prices based on the information received. Whether investors earn an abnormal return from the investments using Semi Strong form or not? Is Semi strong form efficiency useful to investors for the market prediction? In India, This study was conducted by a few researchers and used different prediction tools and techniques of foreign financial experts. Another, reason is developed countries stock markets shareholders can predict based on three forms of market efficiency and make it abnormal profit, but in developing countries stock markets can only predict from Semi-Strong method for an abnormal return. Hence, the present study is attempted to test the Semi strong form efficiency of BSE SENSEX index companies.

OBJECTIVES OF THE STUDY

The overall objective of the study is to examine the Semi-strong form market efficiency of the BSE SENSEX Companies. The specific objective is, to examine whether the Semi-strong form efficiency reacts to Pre and Post dividend announcement of BSE SENSEX companies.

HYPOTHESIS OF THE STUDY

The following is the research hypothesis of the study.

H_o: The Pre and Post Reaction on Dividend Announcements of BSE SENSEX index does not fully reflect the security prices.

3. Methodology

DATA AND SAMPLE SELECTION

An event study method is used for the analysis. The period of the study is from 1st April 2013 to 31st March 2023. The event window is used to show the impact on before and after the particular event day and to analyse information will affect the price or not. In this study, Pre and Post event days generated. The daily data is used for the analysis and set the event window at 15 days before (Pre) and 15 days after (Post) dividend announcement days. The announcement day is represented by 0 and Estimation window is 120 days before the event window. (-15, 0, +15) = -15,-14,-13 …-4, -3, -2, -1, 0, +1, +2, +3, +4 ... +13,+14,+15. The study mainly depends on secondary data. The required data for the study is daily closing price of BSE SENSEX companies. Data was collected from www.bseindia.com and also the dividend announcements of BSE SENSEX companies. There are 28 events of SENSEX companies selected from Annual and Interim dividend announcements. The sample section was done through BSE SENSEX companies. BSE SENSEX companies are selected, based on the high market capitalisation value.

TOOLS USED FOR THE STUDY

The tools are used for testing the Semi-strong form efficiency of Indian stock market. The computation of data for this study was made by using Eviews. The following calculations are

done based on the Market Model method. This model previously studied by Tran Thi Xuan Anh et al., (2022), Mitesh Patel et al., (2022), Rajesh Khurana and Warne, D. P. (2016), and Hasnain Manzoor (2015).

Calculation of Expected Returns

The market model is specified thus:

$E(R_{it}) = \alpha + \beta (R_m)$

Where:

$E(R_{it})$ = returns on a stock i at time period t

α = Alpha; β = Beta

(R_m) = Market return

Calculation of Actual Returns

Stock market return is calculated based on the current Market price divided by previous closing price. It is written by the following formula,

$R_{lt} = LN [L_{lt} / L_{lt-1}]$

Where:

R_{lt} = the daily return on day t for indices l

L_{lt} = closing values for indices l

L_{lt-1} = closing values for indices l on day t-1

LN = Natural log

Calculation of Abnormal Return (AR)

In order to analyse the behavior of market for the announcements, estimate abnormal returns (AR) at the time of the announcement, and pre and post prices on the announcement. The abnormal return is finding as:

$ASR_{it} = AR_{it} - E(R_{it})$

Where:

ASR_{it} = Abnormal return

AR_{it} = Actual return

$E(R_{it})$ = Expected return

Calculation of Cumulative Abnormal Return (CAR)

In order to make generalizations and to draw an overall inference for the market reactions to earnings announcements, the cumulative abnormal returns (CARs) for the 31-day event window, from the start of the event period t-15 (day - 15) up to the time t+15 (day + 15) as follows:

$CAR_{it} = \Sigma\ ASR_{it}$

Where:

CAR_{it} = Cumulative Abnormal Return

ASR_{it} = Sum of all Abnormal return

Calculation of Average Abnormal Return (AAR)

Then the cross sectional average abnormal return at time „t" is measured by averaging abnormal returns at day „t" overall the firm of BSE SENSEX Index.

$$AAR_{it} = \sum_{t=1}^{n} \frac{ASR_{it}}{n}$$

Where:

AAR_{it} = Average Abnormal Return

ASR_{it} = Abnormal Stock Returns on security i at time t

Calculation of Cumulative Average Abnormal Return (CAAR)

The cumulative average abnormal return was calculated by aggregating the Average Abnormal Return over the event window period

$$CAAR_{it} = \sum_{t=1}^{n} \frac{AAR_{it}}{n}$$

Where:

$CAAR_{it}$ = Cumulative Average Abnormal Return

AAR_{it} = Average Abnormal Return on security i at time t

Calculation of T-Statistics for Average Abnormal Return (AAR)

The AARs test for statistical significance using the t-statistic:

$$T(AAR_{it}) = \frac{AAR_{it}}{\frac{\sigma}{\sqrt{n}}}$$

Where:

T (AAR_{it}) = T-Statistics for Average Abnormal Return

AAR_{it} = Average Abnormal Return on security i at time t

$\frac{\sigma}{\sqrt{n}}$ = Standard Error

Note: Standard Error calculated using standard deviation of event window divided by total number of companies.

Calculation of T-Statistics for Cumulative Average Abnormal Return (CAAR)

The CAARs test for statistical significance using the t-statistic:

$$T(CAAR_{it}) = \frac{CAAR_{it}}{\frac{\sigma}{\sqrt{n}}}$$

Where:

T ($CAAR_{it}$) = T-Statistics for Cumulative Average Abnormal Return

$CAAR_{it}$ = Cumulative Average Abnormal Return on security i at time t

$\frac{\sigma}{\sqrt{n}}$ = Standard Error

Note: Standard Error calculated using standard deviation of event window divided by total number of companies.

4. Analysis and Interpretation

TABLE NO.1 BSE SENSEX INDEX COMPANIES: AAR AND CAAR UNDER THE MARKET MODEL FOR THE PERIOD OF 1ST APRIL 2013 TO 31ST MARCH 2023

DAYS	2013-2016				2016-2019			
	AAR	T Statistic	CAAR	T Statistic	AAR	T Statistic	CAAR	T Statistic
-15	0.00493	0.27632**	0.00493	0.07088	-0.00024	-0.02412	-0.00024	-0.01466
-14	0.00393	0.22021**	0.00886	0.12736	0.01221	1.23980***	0.01197	0.73858**
-13	0.00511	0.28651**	0.01397	0.20085	-0.02072	-2.10458	-0.00875	-0.54005
-12	-0.00270	-0.15135	0.01127	0.16203	0.00104	0.10574	-0.00771	-0.47581
-11	0.00332	0.18620	0.01459	0.20979	0.00118	0.11959	-0.00653	-0.40315
-10	-0.00994	-0.55716	0.00465	0.06688	-0.02094	-2.12745	-0.02748	-1.69567**
-9	-0.00430	-0.24074	0.00036	0.00513*	-0.00670	-0.68005	-0.03417	-2.10883**
-8	-0.00124	-0.06950	-0.00088	-0.01270	-0.00093	-0.09489	-0.03511	-2.16648**
-7	-0.00304	-0.17061	-0.00393	-0.05646	0.01042	1.05838***	-0.02469	-1.52346**
-6	-0.00617	-0.34568	-0.01010	-0.14513	-0.00615	-0.62505	-0.03084	-1.90321**
-5	-0.00544	-0.30458	-0.01553	-0.22325	0.00969	0.98431	-0.02115	-1.30520**
-4	-0.01735	-0.97225	-0.03288	-0.47263	0.00543	0.55113	-0.01572	-0.97036
-3	-0.00919	-0.51477	-0.04207	-0.60467	-0.01729	-1.75673**	-0.03302	-2.03765**
-2	-0.00175	-0.09817	-0.04382	-0.62985	-0.01154	-1.17179**	-0.04456	-2.74956**
-1	-0.00085	-0.04779	-0.04467	-0.64211	0.00905	0.91919	-0.03551	-2.19111**
0	-0.09396	-5.26545**	-0.13863	-1.99269**	-0.01436	-1.45842**	-0.04986	-3.07716**
1	0.00082	0.04588	-0.13781	-1.98092**	0.00790	0.80253	-0.04196	-2.58959**
2	-0.00266	-0.14901	-0.14047	-2.01914**	0.00538	0.54657	-0.03658	-2.25753**
3	0.00022	0.01211*	-0.14025	-2.01603**	-0.00243	-0.24645	-0.03901	-2.40726**
4	0.00401	0.22456	-0.13625	-1.95843**	-0.00766	-0.77805	-0.04667	-2.87996**
5	-0.00794	-0.44482	-0.14418	-2.07253**	0.00576	0.58512	-0.04091	-2.52447**
6	-0.00083	-0.04656	-0.14501	-2.08447**	-0.01176	-1.19407**	-0.05266	-3.24992**
7	0.00265	0.14830	-0.14237	-2.04643**	0.00745	0.75678	-0.04521	-2.79014**
8	0.00083	0.04632*	-0.14154	-2.03455**	0.00620	0.62926	-0.03902	-2.40784**
9	-0.00185	-0.10385	-0.14340	-2.06119**	0.00180	0.18281	-0.03722	-2.29677**
10	0.00024	0.01318	-0.14316	-2.05781**	0.00538	0.54668	-0.03184	-1.96464**
11	-0.00196	-0.10994	-0.14512	-2.08601**	-0.00391	-0.39713	-0.03575	-2.20592**
12	-0.00629	-0.35222	-0.15141	-2.17635**	-0.00295	-0.29943	-0.03869	-2.38783**
13	0.01108	0.62071**	-0.14033	-2.01714**	-0.01011	-1.02654**	-0.04880	-3.01150**
14	-0.01361	-0.76242	-0.15394	-2.21270**	0.00876	0.89007	-0.04004	-2.47074**
15	0.01508	0.84516**	-0.13885	-1.99592**	-0.01740	-1.76690**	-0.05743	-3.54421**

Source: computed from secondary sources

Note: *, ** and *** indicates 1, 5 and 10 per cent level of significance

TABLE NO.2 BSE SENSEX INDEX COMPANIES: AAR AND CAAR UNDER THE MARKET MODEL FOR THE PERIOD OF 1ST APRIL 2013 TO 31ST MARCH 2023

DAYS	2019-22				2022-23			
	AAR	T Statistic	CAAR	T Statistic	AAR	T Statistic	CAAR	T Statistic
-15	-0.00733	-1.00255**	-0.00733	-0.46763	-0.01016	-0.97177	-0.01016	-0.49489
-14	-0.00241	-0.32961	-0.00974	-0.62137	0.01001	0.95714	-0.00015	-0.00745*
-13	-0.00133	-0.18221	-0.01107	-0.70636	0.01234	1.18059***	0.01219	0.59378
-12	0.01723	2.35741***	0.00616	0.39323	-0.01868	-1.78638**	-0.00648	-0.31596
-11	-0.00724	-0.99022	-0.00108	-0.06865	-0.01312	-1.25444**	-0.01961	-0.95481
-10	0.01133	1.54910***	0.01025	0.65391	0.00748	0.71574	-0.01212	-0.59030
-9	0.00138	0.18810	0.01162	0.74165	0.01327	1.26885***	0.00114	0.05588
-8	0.01186	1.62248***	0.02349	1.49844***	-0.00101	-0.09689	0.00013	0.00653*
-7	-0.00186	-0.25450	0.02163	1.37973***	-0.00498	-0.47682	-0.00485	-0.23629
-6	-0.00558	-0.76303	0.01605	1.02383***	0.00241	0.23105	-0.00243	-0.11862
-5	-0.00595	-0.81323	0.01010	0.64450	0.01008	0.96431**	0.00765	0.37247
-4	0.00048	0.06565	0.01058	0.67513	-0.00641	-0.61312	0.00123	0.06022
-3	-0.00372	-0.50892	0.00686	0.43775	-0.00658	-0.62922	-0.00534	-0.26021
-2	0.00434	0.59414	0.01120	0.71488	-0.00284	-0.27189	-0.00818	-0.39868
-1	0.00666	0.91066**	0.01786	1.13964***	-0.00514	-0.49149	-0.01332	-0.64899
0	-0.01252	-1.71267**	0.00534	0.34079	-0.00495	-0.47343	-0.01828	-0.89010
1	-0.00598	-0.81842	-0.00064	-0.04096	-0.01478	-1.41361**	-0.03306	-1.61001**
2	0.00530	0.72509	0.00466	0.29725	0.00480	0.45980**	-0.02825	-1.37584**
3	-0.00419	-0.57363	0.00047	0.02969*	-0.00826	-0.79054	-0.03652	-1.77844**
4	0.00811	1.10972***	0.00858	0.54731	0.00118	0.11294	-0.03534	-1.72092**
5	-0.00597	-0.81624	0.00261	0.16658	0.00717	0.68626	-0.02816	-1.37143**
6	0.00000	0.00013*	0.00261	0.16664	-0.01008	-0.96442	-0.03825	-1.86258**
7	-0.01316	-1.80052**	-0.01055	-0.67319	-0.00232	-0.22268	-0.04058	-1.97598**
8	0.00027	0.03635*	-0.01029	-0.65624	0.00373	0.35668	-0.03685	-1.79434**
9	-0.00754	-1.03133**	-0.01783	-1.13729**	-0.00035	-0.03410	-0.03720	-1.81171**
10	-0.01082	-1.47977**	-0.02864	-1.82751**	-0.00551	-0.52767	-0.04272	-2.08043**
11	-0.00122	-0.16624	-0.02986	-1.90505**	-0.00886	-0.84723	-0.05158	-2.51190**
12	0.00555	0.75970**	-0.02431	-1.55070**	0.01318	1.26079***	-0.03840	-1.86982**
13	-0.00247	-0.33764	-0.02677	-1.70819**	-0.02593	-2.47922**	-0.06433	-3.13241**
14	0.00538	0.73597**	-0.02139	-1.36490**	0.01957	1.87168***	-0.04475	-2.17922**
15	-0.00678	-0.92747	-0.02817	-1.79751**	-0.01349	-1.29062**	-0.05825	-2.83649**

Source: computed from secondary sources

Note: *, ** and *** indicates 1, 5 and 10 per cent level of significance

The Table No 1 and 2 reports the results of AAR and CAAR under the Market Model for the period of from 1ST APRIL 2013 TO 31ST MARCH 2023. The dividend announcement of BSE SENSEX companies return series calculated. The estimation window of BSE SENSEX up to -120 days. And, the Event Window is Pre-announcement period is -15 days and the post-announcement period is 15 days. The event date is considered as Zero. The AAR and CAAR values are showing positive and Negatives values with lags. Among the BSE SENSEX index Companies, The highest AAR value from 2013 to 2019 is 0.019576 and lowest AAR in 2019-2023 is -0.09396. Similarly, the highest CAAR value from 2013-19 is 0.02349 and lowest CAAR in 2019-23 is -0.15394.

The highest value of AAR in the pre-event window on day -13, -14, -12, and -9 for BSE

SENSEX index and values are 0.00511, 0.01221, 0.01723 and 0.013271. And, the lowest value of AAR in the pre event window on day -4, -10, -15, and -12 for BSE SENSEX index and values are -0.01735, -0.02094, -0.00733, and -0.018684. The highest value of AAR in the post event window on day 15, 14, 4, and 14 of BSE SENSEX and values are 0.01508, 0.00876, 0.00811, and 0.01957. And, the lowest value of AAR in the post event window on day 0, 15, 7, and 13 of BSE SENSEX and values are -0.09396, -0.0174, -0.01316, and -0.025931.

The highest value of CAAR in the pre-event window on day -11, -14, -8, and -13 of BSE SENSEX and values are 0.01459, 0.01197, 0.02349, and 0.01219. And, the lowest value of CAAR in the pre-event window on day -1, -2, -13, and -11 of BSE SENSEX and values are -0.04467, -0.04456, -0.01107, and -0.01961. The highest value of CAAR in the post event window on day 4, 10, 4, and 0 of BSE SENSEX and values are -0.13625, -0.03184, 0.00858, and -0.018281. And, the lowest value of CAAR in the post event window on day 14, 15, 11, and 13 of BSE SENSEX and values are -0.15394, -0.05743, -0.02986, and -0.064333.

Based on the T statistic both AAR and CAAR values are significant with 1, 5 and 10 per cent levels in many cases and do not fall in with 1, 5 and 10 per cent levels in certain cases. The test values are almost negative and which lead them below the critical values. Therefore, there is a no evidence of earning abnormal return to investors on dividend announcements (Both final and interim) of BSE SENSEX Index companies.

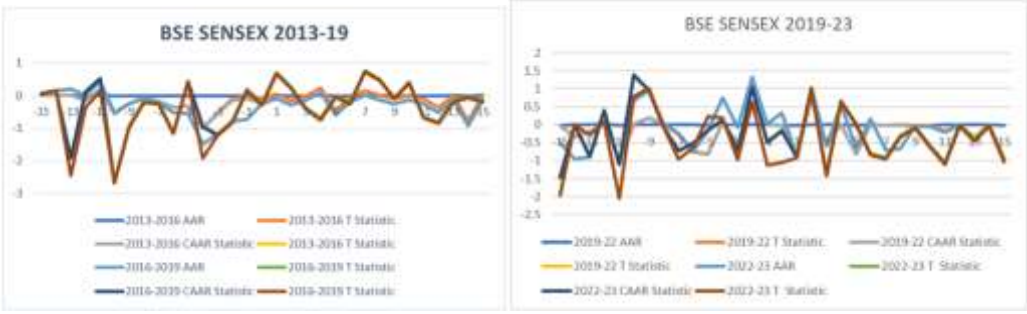

FIGURE NO 1 and 2: AAR AND CAAR OF BSE SENSEX INDEX COMPANIES

Source: Computed from Secondary data

Figures No 1 and 2 depicts the AAR and CAAR are highly fluctuated during the pre and post dividend announcement period. AAR and CAAR has significant and insignificant impact during pre and post announcement because the dividend information and other information supported the movement, movement of AAR and CAAR generate up and down slope in every short period of time. BSE SENSEX companies has less chance to earn abnormal return from t1 to t31 days. And, the CAAR of BSE SENSEX shows t3 to t15 grown up. But, all the companies CAAR declined that will lead to inefficient in Semi strong form. In this case, investors cannot have a chance to earn an abnormal return in Pre and Post announcement periods.

It clearly suggests that market react soon after the announcement of dividend. Under the market model, most of CAAR value during pre and post announcement shows negative signals. Hence, the null hypothesis exists “The Pre and Post Reaction on Dividend Announcements of BSE SENSEX Company does not fully reflect the security prices” is

accepted and Semi-strong form not exist for BSE SENSEX companies. It is suggested the investors cannot have the chance to earn abnormal return from these stocks and the market information quickly reacts to the stock prices.

5. Findings and Suggestions

The Market model is a one of the methods for measuring Semi strong form efficiency. The Market Model for dividend announcements of BSE SENSEX Index companies is taken for the study. It is to be found that AAR shows in BSE SENSEX have declined from 2019. Therefore, it is suggested the investors cannot have chance to earn abnormal return from these securities as the market information quickly reacts to the stock prices.

6. Conclusion

The market efficiency is a popular concept in stock market. It is the best technique for testing stock market return predication. These can be measuring through Weak form, Semi Strong form and the Strong form. In this study, event study is used for identifying the market efficiency. The Market Model of AAR and CAAR calculated for the period of from 1ST APRIL 2013 TO 31ST MARCH 2023. The study concluded that BSE SENSEX companies coefficients are in negative sign. Therefore, the SENSEX Service Index is not in Semi Strong form efficiency. So, the investors need to have an awareness about BSE SENSEX service Index companies for the future investments.

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