

TESTING MARKET EFFICIENCY: AN EMPIRICAL STUDY ON SECTORAL REACTION TO UNION BUDGET ANNOUNCEMENT

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Introduction

Government Budget, alternatively known as the Annual Financial Statement of a Nation, is defined as an annual fiscal statement depicting the revenues and expenditures for a financial year that is often moved by the legislature, sanctioned by the Chief Executive or President, and given by the finance minister to the country. It is not just a statement of estimates but also an important tool for economic growth and development as it allows the government to prioritize and implement its policies and programmes within its financial capabilities (Musell et al., 2019). It is a major economic event that outlines the anticipated economic activities of a country (Rajamohan et al., 2015). Market players who invest in stocks are not only interested in the market's fluctuations but are also keen to understand the upcoming economic events and activities (Pandya, 2014). Government through budget speech announces various policy measures and proposals, such as tax policy, infrastructure development plans, social welfare reforms, housing and urban development programs etc. These policy measures and proposals are focussed on the development of various sectors impacting the financial economic stability (Sardana et al., 2019). Such policies have the potential to significantly affect industries, stock market and individual stock prices. The stock market reacts depending on how the investors interpret the economic activities. Hence, the performance of stock markets is regarded as a crucial indicator of economic performance. In recent years, the Indian stock market has experienced tremendous growth in various aspects of trading, including the number of listed companies, market capitalization, membership, trading value, and daily trading volume (Ryaly et al., 2017). This unprecedented growth in the Indian stock market raises the interest over the efficiency of the stock market. Budget announcements usually result in fluctuation in stock prices and a topic of interest to market players as well as researchers. Based on this observed cause-and-effect relationship or empirical evidence, there is an indication that stock market activity is influenced by budget-related factors (Thomas & Shah, 2002). Since, all the information becomes accessible to the general public immediately after the presentation of

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Budget, there are certain questions that need to be addressed. Does this information influence the prices of securities and consequently returns? Additionally, how quickly the information is absorbed by the security prices? Understanding market efficiency around budget announcements can help to understand investor behaviour and the efficacy of various trading strategies. Thus, testing the EMH allows to assess how quickly and accurately information is incorporated into stock prices. If the market efficiently adjusts to new budget information, it supports the idea that public information is rapidly reflected in asset prices. The present study is an attempt to address these issues in the Indian Stock Market with assumption of its universal applicability.

Moreover, research indicates that government budget policies and resource allocations can significantly influence the growth and performance of financial markets. In the United States, housing finance policy was reorganized as a result of a political struggle in the 1960s leading to the creation of mortgage-backed securities and the modern securitization market (Quinn, 2017). The publication, approval, and actions within government budgets can also influence stock market performance, as evidenced by Portuguese companies (Oliveira, 2014). Similarly, Indian union budget has also observed significant impact on country's financial market. According to Thomas & Shah (2002), there existed strong interplay between budget and performance of Indian financial market. It had been found that the volatility in the stock tends to increase in the month of February and March (Kaur, 2004) due to this most significant economic event. People start anticipating the consequences of announcements and start speculating and manipulating the stock prices which increases the volatility during the budget period (Singhvi, 2014). Few studies showed that stock prices respond quickly to budgetary announcements, which enables the traders to make abnormal profits (Kutchu, 2012); (Das & Das, 2022); (Manjunatha & Hassan, 2023). However, few studies concluded that the market is efficient in semi-strong form to the Union budget, with initial volatility but ultimately absorbing the information without significant long-term impact on returns (Gupta & Kundu, 2006); (Gakhar et al., 2015); (Ashraf & Baig, 2019); (Chaudhary et al., 2020). While the existing literature provides evidence that there is a relation of budget and Indian stock market, but there remain conflicting views regarding the market efficiency. Moreover, the studies considered market barometer Nifty (Singhvi, 2014); (Gakhar et al., 2015) and Sensex (Gupta & Kundu, 2006); (Soni, 2010); (Saraswat & Banga, 2012); (Das & Das, 2022) to examine the market efficiency to the union budget but budget being concentrated on different sectors, the broad market analysis is less representative to generalise the impact to all the different sectors of the market. This gap provides a scope for the researcher to study the impact of budget announcement on Indian stock market considering sectoral indices as analysis of sectoral

indices will provide insights into, how different industries or sectors are uniquely affected by budgetary changes.

METHODS:

To test the market efficiency in the Indian stock market, Event study methodology (Fama et al., 1969) (Fama, 1976) and market model of event study (Brown & Warner, 1985) (Mackinley, 1997) is used. The study considers the "Announcement of Union budgets" as event for purpose of the study and selected five sectoral indices under NSE. The researcher selected NSE indices which are Nifty Financial services (34.88%), Nifty IT (13.08%), Nifty Oil and Gas (11.17%), Nifty FMCG (10.91%), and Nifty Auto (6.36%). These selected five sectoral index constitute approx. 76.4% of total weightage of Nifty 50 stocks. The time period for the study is from 2019 to 2023. Daily closing data for the mentioned time period of the selected index has been collected and used to calculate the returns. The data have been taken from National Stock Exchange website, and the return on the Nifty 50 equity index, has been used as proxy to measure market return as it the main barometer market index in India which is used in research studies. Accordingly, an Event date, Event Window and Estimation window is framed. Here, the day the union budget is announced each year is considered as "Event date". The date of announcement of event is indicated as "0". Further, following the suggestion, of existing literature (Brown & Warner, 1985) and (Jong & Naumovska, 2015) the event window is kept short to control confounding effect. The event window is kept to -7 and +7 trading days assuming the impact of announcement exists for 7 trading days before and after the event. And lastly, the estimation window for the study is kept as 120 days following the suggestion, (Peterson, 1989) that the estimation time for daily studies should be between 100 and 300 days.

Calculation of Actual returns (Sectoral return and Market return): A few studies, dealt with issues of measuring returns and suggested to use continuous compounded returns (Fama, 1976), (Brown and Warner, 1985) as log form return and log transformed returns improves the normality of the returns (Glenn V. Handerson, 1990) and the same is computed as under:

$$\text{Normal Return, } R_{dt} = \ln(P_{dt} - P_{dt-1})$$

$$\text{Market Return, } R_{mt} = \ln(P_{mt} - P_{mt-1})$$

R_{dt} = Return of index d for the time period t,

R_{mt} = Return on market index (Nifty 50) m during the time period t,

Where, P_{dt} and P_{dt-1} denotes the sector index d, closing prices for the time period t, and t-1 respectively, and P_{mt} and P_{mt-1} denotes the market index m, (Nifty50) closing prices for the time period t, and t-1 respectively.

Calculation of Expected returns

The normal or expected returns can be calculated for a particular index using market model which is presented below:

$$E(R_{dt}) = \alpha_i + \beta_i * (R_{mt})$$

Where, $E(R_{dt})$ = Expected return on index, d at day t, and α_i and β_i are regression intercept and slope coefficient of the index which is calculated using Ordinary Least Square Method and R_{mt} is the market index return m, at day, t.

Calculation of Abnormal return

After calculating normal return, the difference between actual return and normal return is recognised as abnormal return and which can be measured as:

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

Further, Average abnormal returns (AAR) and Cumulative average abnormal returns (CAAR) are calculated by averaging the estimated abnormal returns across selected indices and then accumulated the AAR overtime in order to estimate cumulative average abnormal returns (CAARs). It is assumed that if the values of AAR and the values of CAAR is close to zero than the market is efficient.

RESULTS:

Table 1 : Year wise analysis of Abnormal Returns of Nifty Financial Services Index Returns along with its t- value

Event Days	2019		2020		2021		2022		2023	
	AR	t-value	AR	t-value	AR	t-value	AR	t-value	AR	t-value
-7	0.003	0.810	0.000	-0.035	-0.018	-1.228	0.004	0.742	0.007	1.798
-6	0.005	1.294	0.002	0.358	0.022	1.539	0.004	0.707	0.000	0.096
-5	0.002	0.458	0.001	0.138	0.004	0.249	0.006	1.112	0.000	0.015
-4	0.002	0.667	0.009	1.757	-0.008	-0.567	0.001	0.220	-0.007	-2.006*
-3	-0.001	-0.338	-0.003	-0.526	-0.025	-1.752	0.009	1.750	-0.007	-1.869
-2	0.000	0.131	0.006	1.125	0.000	-0.019	-0.004	-0.801	0.000	0.109
-1	0.000	-0.105	0.010	1.827	-0.028	-1.951	-0.005	-0.996	-0.001	-0.197
0	0.012	3.234**	-0.007	-1.277	-0.020	-1.373	-0.002	-0.319	0.002	0.614
1	-0.006	-1.506	-0.001	-0.107	-0.008	-0.560	0.007	1.360	-0.003	-0.862
2	-0.002	-0.650	-0.002	-0.289	0.069	4.801**	0.000	-0.073	0.008	2.101*
3	0.001	0.276	0.001	0.250	0.028	1.943	-0.002	-0.287	0.001	0.387
4	-0.002	-0.501	0.004	0.791	0.009	0.634	-0.007	-1.343	0.004	1.068
5	0.000	-0.112	0.001	0.222	0.007	0.513	-0.002	-0.297	-0.005	-1.271
6	-0.004	-1.124	0.007	1.257	0.005	0.323	0.001	0.199	0.000	-0.018
7	-0.003	-0.852	-0.002	-0.354	0.006	0.404	0.003	0.617	0.002	0.669

Source: Author's Computation[*Significant at 5% level and ** significant at 1% level]

Table 1 presents a year-wise analysis of the impact of event on abnormal returns and corresponding t-values for the Nifty Financial Services index within a 15-day event window.

A significant positive abnormal return of 0.012 is observed on the event day of 2019, demonstrating market efficiency as returns gradually adjusted in subsequent days. Positive abnormal returns persist for 9 out of 15 days, with the remaining 6 days showing negative abnormal returns. In 2020, abnormal returns are positive for 10 days around the event, though lacking statistical significance. The Union Budget 2021 triggers an increased index, indicating a positive market response, with a noteworthy abnormal return of 0.069 on the +2 day at a significant 1% level. However, adjustments, similar to 2019, occur in subsequent event days. In 2022, positive sentiment is observed with positive abnormal returns for 9 days, though not at a significant level. Lastly, in 2023, the Union Budget announcement yields positive impacts for 10 days, with statistically positive abnormal returns on +2 days and statistically negative returns on -4 days. Overall, the analysis suggests market efficiency across the years, except for specific days surrounding the events in 2019, 2022, and 2023, limiting opportunities for investors to earn abnormal profits.

Table No 2 : Year wise analysis of Abnormal Returns of Nifty IT Returns along with its t- value

Event Days	2019		2020		2021		2022		2023	
	AR	t-value	AR	t-value	AR	t-value	AR	t-value	AR	t-value
-7	-0.010	-1.194	0.007	0.691	0.015	1.263	-0.008	-0.795	0.002	0.189
-6	-0.007	-0.890	-0.002	-0.152	-0.005	-0.455	-0.010	-1.009	0.013	1.424
-5	-0.002	-0.240	-0.003	-0.299	0.010	0.813	-0.010	-0.997	0.008	0.849
-4	-0.005	-0.620	0.003	0.289	-0.013	-1.110	-0.011	-1.141	0.005	0.565
-3	0.007	0.902	0.001	0.145	0.005	0.399	-0.028	-2.803*	0.009	0.975
-2	-0.010	-1.235	-0.008	-0.791	-0.017	-1.388	0.011	1.102	0.008	0.900
-1	-0.001	-0.117	-0.010	-1.029	-0.019	-1.605	0.014	1.453	-0.012	-1.327
0	-0.020	-2.455*	0.013	1.314	-0.020	-1.655	0.002	0.183	0.012	1.335
1	-0.001	-0.172	-0.015	-1.471	0.003	0.276	0.000	-0.007	0.019	2.006*
2	-0.008	-1.039	0.013	1.289	0.002	0.131	-0.010	-0.970	-0.014	-1.506
3	-0.004	-0.478	0.004	0.377	-0.010	-0.860	0.002	0.230	0.000	-0.024
4	-0.001	-0.146	-0.006	-0.578	-0.012	-1.005	0.003	0.276	0.000	-0.034
5	0.001	0.182	0.006	0.628	0.013	1.110	-0.007	-0.673	0.006	0.643
6	0.026	3.185**	-0.002	-0.153	-0.006	-0.537	0.002	0.166	0.006	0.635
7	-0.009	-1.102	0.000	-0.035	0.003	0.236	0.002	0.167	-0.001	-0.140

Source: Author's Computation[*Significant at 5% level and ** significant at 1% level]

Table 2 represents the analysis of impact of union budget announcement on Nifty IT index returns. It is observed that the sentiment of investors around union budget 2019,2020, 2021 and 2022 were quite negative around the budget as the normal returns were negative for 12 days, 7 days, 8 days and 7 days respectively. While the event 2019 impact the

abnormal returns on Nifty IT index negatively on the event day significantly, there was recovery on the +6 day of the event with significantly positive abnormal returns at 1 % level of significance, which indicates the inefficiency in the market and opportunity to earn abnormal profit. Also, in the year 2022 the impact was significant on -3 day of event and recovery is seen in later days but not at the significant level. The 2023 union budget announcement shows positive sentiment with 12 days positive returns and significantly positive on +1 day after the event.

Table 3: Year wise analysis of Abnormal Returns of Nifty Oil and Gas index Returns along with its t- value

Event Days	2019		2020		2021		2022		2023	
	AR	t-value	AR	t-value	AR	t-value	AR	t-value	AR	t-value
-7	-0.004	-0.576	0.008	1.029	-0.011	-0.902	0.002	0.222	0.005	0.715
-6	0.001	0.091	-0.005	-0.594	0.014	1.126	-0.003	-0.463	-0.001	-0.084
-5	-0.003	-0.429	0.003	0.329	0.008	0.660	0.004	0.519	-0.004	-0.603
-4	-0.019	-2.576*	0.001	0.182	-0.009	-0.719	0.000	0.044	-0.009	-1.321
-3	0.006	0.787	-0.002	-0.241	-0.013	-1.040	0.005	0.684	-0.043	-6.237**
-2	0.002	0.203	-0.011	-1.410	-0.023	-1.771	0.006	0.785	-0.039	-5.582**
-1	0.000	-0.008	-0.021	-2.611*	-0.017	-1.328	-0.001	-0.114	-0.012	-1.765
0	-0.006	-0.751	0.001	0.063	-0.004	-0.326	-0.022	-3.189**	-0.019	-2.657*
1	0.001	0.097	-0.001	-0.134	-0.018	-1.452	-0.008	-1.096	-0.020	-2.864*
2	0.014	1.897	0.009	1.116	0.020	1.564	0.002	0.271	-0.022	-3.091**
3	-0.002	-0.237	0.005	0.590	0.020	1.567	-0.001	-0.169	0.002	0.307
4	-0.003	-0.405	0.004	0.553	0.006	0.442	0.017	2.424*	-0.001	-0.109
5	-0.003	-0.440	-0.002	-0.290	0.007	0.581	-0.006	-0.900	-0.002	-0.232
6	-0.004	-0.531	-0.003	-0.413	-0.009	-0.676	-0.015	-2.162*	-0.005	-0.658
7	0.007	0.929	-0.001	-0.132	0.018	1.409	-0.005	-0.704	-0.004	-0.596

Source: Author's Computation[*Significant at 5% level and ** significant at 1% level]

Table 3 analyses the impact of union budget announcement on abnormal returns of Nifty Oil and Gas index. From the above analysis, it can be said that generally the sentiment around the union budget event is negative throughout all the years. The abnormal returns of Nifty oil and gas index returns is negative for 8 days in 2019, 2020, 2021 and 2022 and negative for 13 days in 2023. Among all the years, union budget announcement 2023 was more negative. The t value on -2 day, -3 day of pre-event and 0 day, +1 day, +2 day of post-event are statistically significant. Also, in the year 2022, the immediate impact of announcement of union budget is statically negative, however the returns were adjusted and turned positive on the +4 day of the post event significantly positive but again on -6 the

day of the post event the returns turned statistically negative. For the year 2019 and 2021 the market was efficient through all the event period. For the year 2020 except -1 day of the event the market was efficient. But, in the year 2023 the market seems inefficient for the event window -3 day, -2 day, 0 day, +1 day and +2 day.

Table 4 : Year wise analysis of Abnormal Returns of Nifty FMCG Index Returns along with its t- value

Event Days	2019		2020		2021		2022		2023	
	AR	t-value	AR	t-value	AR	t-value	AR	t-value	AR	t-value
-7	-0.003	-0.534	-0.002	-0.440	-0.006	-0.929	-0.004	-0.614	-0.007	-1.139
-6	0.000	-0.047	0.004	0.657	-0.001	-0.086	0.009	1.367	0.005	0.843
-5	0.005	0.993	-0.003	-0.465	0.008	1.120	-0.006	-0.809	0.001	0.225
-4	-0.001	-0.267	0.000	-0.026	-0.001	-0.192	0.008	1.139	0.006	1.045
-3	0.002	0.384	0.008	1.486	0.015	2.198*	-0.004	-0.651	0.014	2.271*
-2	0.004	0.689	-0.010	-1.853	-0.012	-1.804	0.007	1.024	-0.008	-1.211
-1	0.002	0.313	-0.001	-0.135	-0.007	-0.970	-0.001	-0.131	0.005	0.785
0	0.011	1.919	0.000	0.022	-0.011	-1.580	0.011	1.608	0.013	2.050*
1	0.001	0.238	0.005	0.878	-0.014	-2.020*	0.004	0.524	0.023	3.653**
2	-0.008	-1.538	-0.007	-1.381	-0.007	-1.015	0.006	0.839	-0.007	-1.114
3	-0.002	-0.360	-0.001	-0.162	0.020	2.949*	0.003	0.485	0.008	1.368
4	0.001	0.180	-0.010	-1.785	0.003	0.459	-0.008	-1.151	-0.010	-1.646
5	0.001	0.163	0.005	0.870	-0.013	-1.891	-0.001	-0.210	-0.005	-0.758
6	-0.007	-1.296	-0.005	-0.951	-0.006	-0.848	-0.005	-0.668	-0.003	-0.472
7	0.007	1.197	-0.009	-1.612	-0.001	-0.116	-0.001	-0.187	-0.003	-0.454

Source: Author's Computation[*Significant at 5% level and ** significant at 1% level]

Table 4 represent the analysis of year wise announcement impact of union budgets in respect to Nifty FMCG index and its corresponding t value for the 15 days event window. From the analysis, it can be said the market is efficient through-out all the selected Union Budgets for Nifty FMCG index except for the -3 day, +1 day and +3 day of the event 2021 and -3 day, 0 day and +1 day of the event 2023. In case of Union Budget 2019, positive abnormal returns are observed for 10 out of 15 days, while the remaining 5 days show negative abnormal returns. In the context of the Union Budget 2020 announcement, abnormal returns are negative for 9 days out of the 15-day window, with the remaining 6 days reporting positive abnormal returns. Additionally, Union Budget 2021 witnesses' negative abnormal returns for 11 days and positive abnormal returns for 4 days. The Union Budget announcement in 2022 shows negative abnormal returns for 8 days, and in 2023, abnormal returns are positive for 9 days surrounding the event.

Table 5 : Year wise analysis of Abnormal Returns of Nifty Auto Index Returns along with its t- value

Event Days	2019		2020		2021		2022		2023	
	AR	t-value	AR	t-value	AR	t-value	AR	t-value	AR	t-value
-7	-0.002	-0.258	-0.001	-0.070	0.021	1.498	0.002	0.183	-0.001	-0.121
-6	0.014	1.615	-0.005	-0.488	-0.003	-0.184	0.006	0.616	0.004	0.511
-5	0.002	0.209	0.014	1.396	0.012	0.890	0.001	0.109	0.013	1.795
-4	0.007	0.857	-0.005	-0.497	-0.010	-0.743	0.015	1.532	0.012	1.694
-3	0.000	-0.020	-0.002	-0.178	-0.024	-1.741	0.013	1.337	0.026	3.611
-2	0.001	0.084	0.007	0.677	-0.015	-1.086	-0.006	-0.566	-0.003	-0.420
-1	0.004	0.456	-0.003	-0.277	-0.033	-2.417*	0.004	0.385	0.018	2.514*
0	-0.013	-1.571	0.012	1.257	0.038	2.794*	-0.022	-2.184*	-0.006	-0.808
1	-0.006	-0.720	0.007	0.741	0.036	2.653*	-0.011	-1.067	0.001	0.164
2	0.002	0.278	-0.021	-2.158*	0.008	0.549	0.017	1.717	-0.001	-0.089
3	-0.003	-0.361	-0.010	-1.055	0.008	0.560	-0.008	-0.827	0.004	0.542
4	0.012	1.427	-0.005	-0.529	-0.016	-1.167	0.004	0.439	-0.007	-1.003
5	0.005	0.643	-0.005	-0.508	0.028	2.060*	-0.001	-0.136	-0.005	-0.752
6	0.001	0.144	-0.018	-1.793	-0.017	-1.234	0.010	1.001	-0.006	-0.829
7	0.002	0.190	-0.006	-0.603	0.007	0.489	-0.009	-0.910	0.006	0.818

Source: Author's Computation[*Significant at 5% level and ** significant at 1% level]

Table 5 examines the impact of Union Budgets on Nifty Auto index and corresponding t-values within a 15-day event window. In Union Budget 2019, positive abnormal returns persist for 11 days, but none are statistically significant, showcasing market efficiency. Conversely, for Union Budget 2020, negative abnormal returns dominate for 11 days, with the t-value significantly negative on the second day post-announcement, indicating investor pessimism. Notably, Union Budget 2021 sees increased Nifty Auto index constituents after the announcement, with significant t-values on the announcement day, +1 day, and +5 days, suggesting market inefficiency on these specific dates. Similarly, in 2022, positive abnormal returns occur for 9 days, with a statistically negative impact on the event day. In 2023, positive abnormal returns are observed for 8 days, with statistically positive t-values on -1 day. Overall, the market is efficient in most years, except for specific dates around the events, where abnormal returns suggest potential opportunities for investors.

Table 6 : Year wise analysis of Average Abnormal Returns of selected index and its cumulative value under event window

	2019		2020		2021		2022		2023	
	AAR	CAAR	AAR	CAAR	AAR	CAAR	AAR	CAAR	AAR	CAAR
-7	-0.0032	-0.0032	0.0024	0.0024	0.0000	0.0000	-0.0010	-0.0010	0.0011	0.0011
-6	0.0023	-0.0009	-0.0011	0.0013	0.0056	0.0056	0.0012	0.0002	0.0044	0.0055
-5	0.0007	-0.0001	0.0023	0.0036	0.0083	0.0139	-0.0010	-0.0007	0.0037	0.0092
-4	-0.0032	-0.0034	0.0018	0.0053	-0.0084	0.0055	0.0026	0.0019	0.0015	0.0107
-3	0.0028	-0.0006	0.0006	0.0059	-0.0085	-0.0030	-0.0010	0.0010	-0.0002	0.0105
-2	-0.0007	-0.0013	-0.0033	0.0026	-0.0133*	-0.0163	0.0027	0.0037	-0.0081*	0.0024
-1	0.0008	-0.0004	-0.0050*	-0.0024	-0.0208*	-0.0371	0.0022	0.0059	-0.0004	0.0019
0	-0.0033	-0.0038	0.0039	0.0014	-0.0032	-0.0403	-0.0066	-0.0007	0.0006	0.0025
1	-0.0022	-0.0060	-0.0009	0.0005	-0.0002	-0.0405	-0.0015	-0.0022	0.0039	0.0064
2	-0.0005	-0.0065	-0.0016	-0.0011	0.0182*	-0.0223	0.0029	0.0008	-0.0071*	-0.0006
3	-0.0019	-0.0085	-0.0003	-0.0014	0.0131*	-0.0092	-0.0011	-0.0003	0.0032	0.0025
4	0.0014	-0.0070	-0.0024	-0.0037	-0.0020	-0.0112	0.0018	0.0015	-0.0029	-0.0004
5	0.0008	-0.0062	0.0010	-0.0028	0.0087	-0.0026	-0.0035	-0.0019	-0.0021	-0.0025
6	0.0024	-0.0038	-0.0042	-0.0069	-0.0066	-0.0092	-0.0015	-0.0034	-0.0015	-0.0041
7	0.0006	-0.0032	-0.0036	-0.0105	0.0065	-0.0027	-0.0021	-0.0054	0.0000	-0.0040

Source: Author's Computation[*Significant at 5% level and ** significant at 1% level]

Table 6 represents the examination of Average Abnormal Returns (AARs) for selected Nifty sectoral indices, along with the cumulative sum of AAR. The data reveals a mix of positive and negative AARs on various event days, but the returns are not statistically significant. The exception includes specific days such as -1 day in 2019; -2 day, -1 days, +2 day and +3 day in 2021; -2 day and +2 day in 2023, where the average abnormal returns were found to be statistically significant. Thus, the absence of statistical significance on the majority of event days aligns with the theory of semi-strong form efficiency in the market. In this context, the market is considered efficient in its ability to rapidly incorporate and adjust to new information. The observed non-significant abnormal returns on most days suggest that the market efficiently reflects all publicly available information, leaving no advantage for investors to consistently capitalize on abnormal returns. The significance observed on specific days implies that, during those periods, the market experienced notable deviations from expected returns due to significant events or information releases. Overall, the results support the notion that the market, in its semi-strong form, adjusts efficiently to information, thereby limiting opportunities for investors to consistently achieve super profits based on historical information.

CONCLUSION:

The present study examined the market efficiency of sectoral indices within Indian

Stock Market to provide valuable insights into how quickly the stock market absorbs and adapts to budget information. The analysis suggests that the market efficiently incorporates public information, leaving limited opportunities for investors to consistently earn abnormal profits. The findings supported the existing evidence of the studies (Gupta & Kundu, 2006); (Gakhar et al., 2015); (Chaudhary et al., 2020) and reveal that, in most event days, abnormal returns of sectoral indices lack statistical significance, aligning with the principles of semi-strong form efficiency. However, occasional exceptions were observed on specific days surrounding Union Budget events, indicating temporary inefficiencies, allowing investors the chance to capitalize on short-term anomalies. Further, the estimated AAR and CAAR supports market efficiency, with the absence of consistent statistical significance on most event days, thereby accepting null hypothesis that the Indian stock market is efficient around Union budget Announcement, indicating that investors cannot consistently earn abnormal profits during these periods. Therefore, the overall trend suggests that the market efficiently adjusts to new information, preventing investors from exploiting predictable patterns for sustained abnormal profits. Overall, the results affirm the market efficiency of sectoral indices, indicating that the stock market incorporates budget information, making it challenging for investors to consistently outperform the market and earn super profits.

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