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The Impact of Stock Split Announcements on Stock Prices: Evidence from Colombo Stock Exchange

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Abstract

The research looks into the impact of stock split announcements on stock prices and market efficiency in the Colombo Stock Exchange (CSE). This research uses a sample of 26 stock split announcements that occurred between 2020 and June 2021. According to the Global Industry Classification Standards, the stock split announcements covered in the study pertain to 26 businesses and 9 industries (GICS). To obtain the results, the usual event research methodology is used. The findings demonstrate significant average abnormal returns of 15.01 percent on the day the stock split news is made public and abnormal returns of 4.11 percent and -4.05 percent one day before and after the stock split announcement date, respectively. The study's findings revealed significant positive abnormal returns one day before the disclosure date, indicating information leakage, and significant negative abnormal returns the next day after the announcement date, indicating CSE informational efficiency. Because stock prices adapt so quickly to public information, these findings support the semi-strong form efficient market hypothesis, which states that investors cannot gain an abnormal return by trading in stocks on the day of the stock split announcement.

Keywords: Stock Split, Capital Market Efficiency, Abnormal Return, Event Study, Colombo Stock Exchange

JEL Classification Code: G14, D53, F65

1. Introduction

Capital markets play a significant role in the economic development of a country by connecting the buyers and sellers of shares, bonds, currencies, and other financial assets. Different types of activities are available in the capital market, and among those activities, the stock exchange stands out by providing a platform for surplus parties to invest their money with the potential to profit through capital gains and

dividends while also knowing that there is a risk of loss. The deficit parties, on the other hand, are aided in raising finance through the issuance of shares. Stock exchange-related operations are tightly controlled by a country's financial system, providing a safe environment for market players to transact with more confidence.

The Colombo Stock Exchange (CSE) was founded in 1985 and is the major institution in charge of stock exchange operations in Sri Lanka (CSE, 2022). CSE is licensed and regulated by the Securities and Exchange Commission of Sri Lanka (SEC), which currently has fifteen members and fourteen trading members (CSE, 2022). As of December 31, 2021, the CSE has 296 businesses listed, representing 19 Global Industry Classification Standards (GICS) groups, with a total market capitalization of Rs. 5,489.17 billion (CSE, 2022). The performance of the CSE is measured by two primary indices: the All Share Price Index (ASPI) and the S&P Sri Lanka 20 (S&P SL20). The ASPI index is a market capitalization-weighted index that includes all voting and non-voting ordinary shares listed on the CSE. It is calculated in real-time. The S&P SL20 index is designed to measure the performance of the 20 largest and most liquid companies listed on CSE.

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The unpredictable introduction of good and unfavorable information to the market appears to cause stock values to follow a ‘random walk’ (Kendall, 1953). The price of a stock is decided by demand and supply on any of the stock exchanges throughout the world (Sharpe et al., 2006). As a result, stock prices rise and fall in response to demand and supply swings. When more individuals buy a stock, its price rises; yet, when more people sell a stock, the heavy selling pressure lowers the stock’s price.

According to Keane (1986), a stock’s demand and supply are largely dependent on information. Market players will sell shares and stock prices will fall as a result of information that will have a negative impact on stock prices, such as poor quarterly profits, lapses in corporate governance, economic and political instability, and terrible occurrences. Due to high purchasing pressure in the market, information that will have a positive impact on stock prices, such as better earnings reports, dividend announcements, the debut of a new product, and corporate acquisitions, will tend to send the price of a company upward. According to Keane (1986), information is critical in setting stock prices, and in a well-functioning capital market, stock prices can promptly and accurately represent all available data.

There are three types of market efficiency to consider: weak-form efficiency, semi-strong form efficiency, and strong form efficiency (Fama, 1970). Because stock prices reflect all prior information when form efficiency is low, it is impossible to achieve abnormal returns by analyzing historical stock price movements and patterns (Fama, 1970). Stock prices in a semi-strong form efficient market reflect all publicly available information, such as business announcements, financial statements, and historical data, and hence investors cannot achieve an exceptional return since stock prices react so quickly to all publicly available information (Fama, 1970). Stock prices with strong form efficiency reflect all prior information, publicly available information, and insider information (Fama, 1970). According to Keane (1986), information is the key to the determination of the stock prices and the key issue of the efficient capital market. Fama (1970) and Fox and Opong (1999) found that an efficient market is one in which prices fully reflect available information. Under the semi-strong form efficiency, the stock prices have already been adjusted to past information and publicly available information; therefore, the only way to outperform the market would be using inside information. The changes of macro-economic variables, decisions of companies, dividend announcements, stock split announcements, rights issue announcements are a few things that contain information.

Stock splits are a type of business statement that divides current shares into numerous numbers of shares and communicates this information to market participants. This is also known as share sub-division. Companies utilize a

ratio known as the split ratio for this division, and the ratio is determined by the company’s Board of Directors. When a stock split occurs, the price of the stock drops, and the number of outstanding shares rises, with no effect on the market capitalization (Carlos & Frank, 2009). For example, in a situation where the split ratio is two for one (2 for 1), every stock held by a shareholder is entitled to two stocks after the split. Therefore, the number of outstanding shares in that particular company will be doubled, and the price per share after the stock split will be reduced to the value equal to the price before the split divided by two. This is how the company’s overall value measured by the market capitalization would remain the same.

Why firms go for stock splits is one of the major questions that most market participants raise. Copeland (1979), Baker and Powell (1993), Mehta et al. (2011), and Grinblatt et al. (1984) indicated that the firms use stock splits to convey their inside information to the market about the current performance and prospects of the firm. Also, Mehta et al. (2011) found that firms use stock splits to get attention from analysts and institutional investors to trigger a revaluation of their firms. By the way, that is also a variant of signaling.

According to Baker and Gallagher (1980) and Baker and Powell (1993), the purpose of stock splits by corporates is to realign the stock price to an optimal, preferred, or normal trading range, which is affordable to most of the investors. According to Dolley (1933) and Murray (1985), Firms use stock splits to enhance liquidity by creating additional shares that generate greater firm trading and ownership dispersion. They revealed that the companies whose stock price has gone up significantly to a high level compared to their market peers would undertake stock split decisions. When the stock price is at very high levels, it will not be affordable to small investors. Therefore, after splitting the stocks, it can reasonably be assumed that more investors will participate, so the stock’s overall liquidity would increase as well.

For researchers, the association between stock split announcements and stock return is a fascinating topic. Stock splits, according to Easley et al. (2001), are one of the most common yet least understood events. According to previous research, stock splits frequently occur following a stock price gain and are associated with positive stock price movement. Stock split announcements, according to Gunathilaka and Kongahawatte (2011), frequently increase the stock price. Even though stock split announcements are essentially a transaction that increases the number of outstanding shares and lowers the price per share with no concrete benefit to shareholders, markets react to the announcements. Researchers around the world analyze the impact of various announcements like bonus issue (Fernando & Gunaratne, 2009), right issue (Ramesh & Rajumesh, 2014), stock splits (Gunathilaka & Kongahawatte, 2011), earnings (Pattanayak et al., 2014), dividends (Dissa Bandara & Perera, 2015),

mergers and acquisitions (Dizdarlar & Can, 2021), and stock repurchase (Li & McNally, 2007) test the market efficiency and identify how fast the stock prices absorb the information.

This study aims to identify the impact of stock split announcements on stock prices as indicated by the abnormal returns. Moreover, this aims at testing how the stock exchange reacts to stock split information. Further, tests the semi-strong form of efficient market hypothesis in the Sri Lankan stock exchange.

2. Literature Review

Different experts from all around the world have come up with different answers to the question “why do corporations go for stock splits?” as proven by their study. Baker and Kapoor (2014) found that the liquidity hypothesis receives the most support among the competing incentives for stock splits, followed by the attention-getting form of the signaling hypothesis, signaling, and the preferred trading range hypotheses. Fama et al. (1969) evidenced that the signaling hypothesis and liquidity hypothesis are the two leading explanations of stock splits. The purpose for stock splits, according to Lakonishok and Lev (1987), appears to be to return the price to a level that is comparable to other companies in the industry and market averages. According to McNichols and Dravid (1990), corporations use the split factor of a stock split to communicate confidential information about future profitability. A stock split, on the other hand, is a costly business activity that makes no fundamental changes, according to the signaling hypothesis (Copeland, 1979). As a result, if management does not have useful private information about future cash flows, they will not split their stocks.

According to Fama et al. (1969), the market’s judgments about the information implications of a split are completely reflected in the price of a stock by the end of the split month, if not virtually immediately after the announcement date. As a result, the study backs up the claim that stock markets are efficient because stock prices respond swiftly to new information. Furthermore, the research shows that there appears to be no way to leverage a split to boost one’s expected profits unless inside information about the split is accessible. As evidenced by Grinblatt et al. (1984) stock prices, on average, react positively to stock dividend and stock split announcements that are uncontaminated by other concurrent firm-specific announcements. Shares split will boost the investor base since more individual investors can acquire the stock, according to the liquidity improvement hypothesis (Conroy et al., 1990; Kadapakkam et al., 2005). Chavali and Zahid (2011) used 20 stock split announcements in their study on “Impact of stock splits on the stock price performance of selected companies in the Indian context,” and found that positive abnormal returns occurred around

the announcement date, confirming that stock splits have a positive impact on stock price performance as evidenced by positive market reaction to post-split announcements.

“The market reaction to stock splits” by Lamoureux and Poon (1987) showed that when a company decides to split its stock, the average number of stockholders increases by 35.6 percent in that year. According to Ikenberry and Ramnath (2002), one year after a stock split, there is a 9 percent abnormal return, although Desai and Jain (1997) found a long-term abnormal return of 12 percent yearly after stock splits. Stock splits, according to Easley et al. (2001), attract both uneducated and informed traders, resulting in no discernible change in the information content of deals. Carlos and Frank (2009) conducted a study to see if an investor can make an above-average return by relying on public information contained in a stock split announcement. They found that the stock price has no effect on the day of the announcement and has a significant positive reaction up to 27 days prior.

Individual investors are especially attentive to company splits when stock split ratios are large, according to a study done by Kesuma et al. (2021). Stock splits, on the other hand, tend to weaken the disposition impact. The study’s final result was that the stronger the stock split ratios, the lesser the disposition effect. Increased split ratios convey private information connected to higher future earnings, according to McNichols and Dravid (1990). As a result, investors’ expectations will be adjusted accordingly. Higher split ratios are linked to an increase in the number of analysts covering the companies, according to Brennan and Hughes (1991). When the split ratios are twofold higher, they discovered that there are 24 percent more analysts covering the stock. Furthermore, Conroy et al. (1990) found that high split ratios will be highlighted by investors and analysts. Because individual investors have limited sources of information and capacities to judge firms’ situations, increased analyst coverage should lead to more individual investor interest (Barber & Oden, 2008). Furthermore, when stock values change significantly, individual investors are likely to be aware of stock splits. Individual investors appear to pay attention to stock splits, as the frequency of minor trades increases dramatically during company splits, as indicated by Schultz’s (2000) study “What drives firm-level stock returns?”.

Higher unexpected stock split ratios associated with higher abnormal returns following the splits and higher split ratios signal future performance (McNichols & Dravid, 1990; Chen et al., 2011; Nayak & Prabhala, 2001). According to Barber and Oden (2008), investors are looking for stocks that attract their attention due to recent news or stocks that have a large trading volume. The reason for investors’ attraction to attention-getting stocks is that they do not have the time or capacity to study all of them. In this situation, announcements

such as bonus issues, right issues, stock splits, earnings, cash dividends, mergers and acquisitions, stock repurchases, and director dealings are extremely relevant and important to investors when making stock selection judgments.

The field of event studies has a long history dating back to the early 1930s. The event study method was used by Chavali et al. (2020) to evaluate the stock market response to elections. Fernando and Gunaratne (2009) used the event study approach to perform a study on the topic “Measuring Abnormal Performance in Event Studies: An Application with Bonus Issue Announcements in CSE.” Furthermore, Phuong (2021), Alam et al. (2020), and Tahir et al. (2020) used the event research approach to investigate how the stock market reacted to the COVID-19 pandemic the COVID-19 lockdown period in India, and terrorist attacks.

3. Data and Methodology

3.1. Sampling Design and Data

To assess the impact of stock split announcements on stock prices, researchers looked at 26 events that occurred between January 2020 and June 2021 and included 26 companies listed on the CSE. After deleting stock split announcements involving non-voting shares and an announcement with an exceptionally high split ratio of 1 for 4500 in Industrial Asphalts Ceylon PLC, a final sample of 26 occurrences was obtained (1:4500). Based on the GICS, Table 1 presents the sample’s summary of events, which contains the company ticker, name, date of the announcement, split ratio, effective date, and the sector to which the company belongs.

Table 1: Events of the Sample Study

Event Number	Company Ticker	Company Name	Date of Announcement	Split Ratio	Effective Date	Industry (GICS)
01	HASU.N	HNB Assurance PLC	6-Nov-20	1:3	7-Dec-20	Insurance
02	CIC.N	CIC Holding PLC	12-Nov-20	1:4	11-Jan-21	Materials
03	EBCR.N	E B Creasy & Company PLC	8-Dec-20	1:100	9-Feb-21	Capital Goods
04	LALU.N	Lanka Aluminium Industries PLC	22-Dec-20	1:5	10-Feb-21	Materials
05	CONN.N	Hayleys Leisure PLC	21-Jan-21	1:2	16-Feb-21	Consumer Services
06	DIPD.N	Dipped Products PLC	21-Jan-21	1:10	16-Feb-21	Materials
07	HAYC.N	Haycarb PLC	21-Jan-21	1:10	16-Feb-21	Materials
08	HAYL.N	Hayleys PLC	21-Jan-21	1:10	16-Feb-21	Capital Goods
09	HEXP.N	Hayleys Fiber PLC	21-Jan-21	1:3	16-Feb-21	Consumer Durables & Apparel
10	KVAL.N	Kelani Valley Plantations PLC	21-Jan-21	1:2	16-Feb-21	Food, Beverage & Tobacco
11	MGT.N	Hayleys Fabric PLC	21-Jan-21	1:2	16-Feb-21	Consumer Durables & Apparel
12	TPL.N	Talawakelle Tea Estates PLC	21-Jan-21	1:2	16-Feb-21	Food, Beverage & Tobacco
13	ACL.N	ACL Cables PLC	5-Jan-21	1:2	2-Mar-21	Capital Goods
14	ALUM.N	Alumex PLC	21-Jan-21	1:2	9-Mar-21	Materials
15	SERV.N	Kingsbury PLC	21-Jan-21	1:2	9-Mar-21	Consumer Services
16	ALUF.N	Unisyst Engineering PLC	21-Jan-21	1:2	10-Mar-21	Capital Goods
17	REG.N	Regnis (Lanka) PLC	21-Jan-21	1:2	10-Mar-21	Consumer Durables & Apparel
18	SINI.N	Singer Industries (Ceylon) PLC	21-Jan-21	1:2	10-Mar-21	Consumer Durables & Apparel
19	SINS.N	Singer (Sri Lanka) PLC	21-Jan-21	1:3	10-Mar-21	Retailing
20	LFIN.N	LB Finance PLC	27-Jan-21	1:4	17-Mar-21	Diversified Financials
21	SAMP.N	Sampath Bank PLC	27-Jan-21	1:3	23-Mar-21	Banks

Table 1: (Continued)

Event Number	Company Ticker	Company Name	Date of Announcement	Split Ratio	Effective Date	Industry (GICS)
22	SUN.N	Sunshine Holdings PLC	5-Feb-21	1:3	31-Mar-21	Food, Beverage & Tobacco
23	LWL.N	Lanka Walltiles PC	15-Feb-21	1:5	1-Apr-21	Capital Goods
24	PARQ.N	Swisstek (Ceylon) PLC	15-Feb-21	1:5	1-Apr-21	Materials
25	TILE.N	Lanka Tiles PLC	15-Feb-21	1:5	1-Apr-21	Capital Goods
26	RCL.N	Royal Ceramics Lanka PLC	12-Feb-21	1:10	23-Apr-21	Capital Goods

Table 2: Number of Stock Split Announcements based on the Split Ratio and Year

Split Ratio	2020	2021	Total Events (Ratio Wise)
1 for 100	01	–	01
1 for 10	–	04	04
1 for 5	01	03	04
1 for 4	01	01	02
1 for 3	01	04	05
1 for 2	–	10	10
Total events (Yearly)	04	22	26

Secondary data is used in this study, and the essential data is collected from the CSE data repository. Split announcements from January 2020 to June 2021, daily closing stock prices, and ASPI data for the first 200 days of the analysis period are all required data. When a stock’s price isn’t traded on a specific date, the previous traded price is used as the price for the non-trading date (Table 1).

The sample is represented in Table 2 by the year of the announcement and the split ratio. The sample’s highest split ratio is a hundred new shares for every existing share (1:100). The split ratio of ten new shares for one existing share is the second highest (1:10). The majority of corporations split their stock into two new shares for every one existing share.

3.2. Mode of Analysis

The Standard Event Study Methodology is a commonly used method to estimate the stock price reaction to firm-specific informational events such as stock splits (Gunathilaka & Kongahawatte, 2011), bonus issues issue (Fernando & Gunaratne, 2009), dividend announcements (Dissa Bandara & Perera, 2015), right issue announcements (Ramesh & Rajumesh, 2014), merger announcements (Dizdarlar & Can, 2021) or market-related informational events such as terrorist attacks (Tahir et al., 2020) political changes, etc.

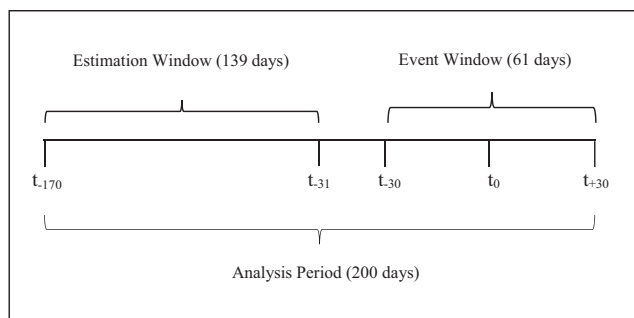


Figure 1: Defining the Analysis Period, Estimation Window, and Event window

This study is carried out using the “Standard Event Study Methodology” which was introduced by Brown and Warner (1985).

3.3. Analysis Period Selected

The date on which the effect of an event is supposed to occur, or the date around which a diffused effect is presumed to be distributed, according to Johnson (1998). Simply put, the event date is the first day on which market players can react to a specific event. The stock split announcement date, or the date on which the stock split announcement is publicly available to all market participants, is the event date in this study. The announcement date differs from the effective date, and the announcement date is taken into account in this study (Figure 1).

For their studies, previous researchers employed various durations of time for the estimating window and event window. Brown and Warner (1985) were among those who used 250 days (239 days for estimation window and 11 days for event window). 321 days were utilized by Dissa Bandara (2001), Dissa Bandara and Samarakoon (2002), and Dissa Bandara and Perera (2015) (200 days for the estimation window and 121 trading days for the event window). This study employs 139 trading days for the estimation window and 61 trading days for the event window, totaling 200 trading days for the analysis period, as shown in Figure 1.

The event date, often known as the stock split announcement date, is designated as “ t_0 ”, and 30 trading days before and after the event is being taken as the even window.

Further, -30, -29, -28 , -1 as the 30 trading days before the event (lag 30 trading days), 0 as the event day, and +1, +2, +3..... , +30 as the 30 trading days after the event (lead 30 trading days) is comprised of the event window. The estimation window spans 139 trading days and ends 31 trading days before the event date. It can be identified as the days between -170th trading day to -31st trading day. Finally, the total analysis period accounts for 200 trading days.

3.4. Calculation of Abnormal Returns (AR)

Event studies are used to determine how abnormal the reaction of stock prices to various news events is. The news in this study is stock split announcements. The excess reaction of the stock price around the day that new information about a stock is given to the market over what is anticipated or predicted is known as abnormal return (AR). AR can be calculated as follows.

$$AR_{it} = R_{it} - E(R_{it}) \tag{1}$$

Where,

AR_{it} = Abnormal return of the firm ‘i’ on the day ‘t’ in the vent period.

R_{it} = The rate of return of the firm ‘i’ on the day ‘t’ in the event period.

$E(R_{it})$ = Expected return on firm ‘i’ on day ‘t’.

Therefore, for the purpose of calculating ARs Actual Stock Returns (R_{it}) and Expected Stock Returns ($E(R_{it})$) should be calculated.

3.5. Actual Stock Return (R_{it})

The following formulae calculate the actual stock returns based on the closing price of the shares.

$$R_{it} = (P_t - P_{t-1}) / P_{t-1} \tag{2}$$

Where,

R_{it} = the rate of return of firm ‘i’ on day ‘t’

P_t = closing share price on the day ‘t’ (current trading day)

P_{t-1} = closing share price on day ‘t-1’ (previous trading date)

3.6. Expected Stock Return ($E(R_{it})$)

The market model states that the return on particular security depends on the return of the market portfolio and

the securities’ responsiveness measured by beta (β). The estimation window period is used in calculating the expected return. Expected/normal return can be measured as,

$$E(R_{it}) = \hat{\alpha}_i + \bar{\beta}_i R_{mt} \tag{3}$$

Where,

$E(R_{it})$ = Expected return on firm ‘i’ on day ‘t’

$\hat{\alpha}_i$ Estimated regression intercept (alpha) of stock ‘i’

$\bar{\beta}_i$ = The estimated systematic risk (beta) of stock ‘i’

R_{mt} = The rate of return on a market portfolio of stocks (ASPI) on day ‘t’

3.7. Market Return (R_{mt})

To calculate the expected stock return, it is necessary to compute first the Market return (R_{mt}). It can be calculated as follows,

$$R_{mt} = (ASPI_t - ASPI_{t-1}) / ASPI_{t-1} \tag{4}$$

Where,

R_{mt} = Return of the All-Share Price Index (ASPI) for tth day

$ASPI_t$ = ASPI for tth day (current day)

$ASPI_{t-1}$ = ASPI for the day before tth day (previous day)

After calculating the market return, the market model can be estimated through Ordinary Least Square (OLS) regression to estimate the parameters of the two-variable regression models. Market returns during the estimation period are treated as independent variables, while the dependent variable is the returns of the firm ‘i’ for the purpose of running the regression. Regression analysis produces estimates of regression intercept α and regression slope β . Finally, the following formula can be derived to calculate ARs,

$$AR_{it} = R_{it} - E(R_{it}) \tag{5a}$$

$$AR_{it} = R_{it} - [\hat{\alpha}_i + \bar{\beta}_i R_{mt}] \tag{5b}$$

3.8. Calculation of Average Abnormal Return (AAR)

A representative measure should be created for further analysis after ARs have been calculated for each and every

day in the event window. The average abnormal return (AAR) is a representative metric that normalizes the ARs of the selected sample. AAR can be calculated as follows,

$$ARR_t = \frac{1}{N} \sum_{i=1}^N AR_{it} \quad (6)$$

Where,

ARR_t = Average abnormal return for day ‘t’

N = Number of events in the sample.

3.9. Calculation of Cumulative Average Abnormal Return (CAAR)

It is regularly witnessed leakage of information, which occurs when information about a key event is leaked to a limited group of market participants before the formal public announcement, according to Brown and Warner (1985). ARs on the day of the announcement, on the other hand, are a poor predictor of the information release’s overall impact. As a result, the Cumulative Average Abnormal Returns (CAARs), which are the sum of all ARs across the event period, would be a stronger indicator. When the market is reacting to new information, the CAARs capture the whole firm-specific stock movement for an entire period. The CAARs can be calculated as follows,

$$CARR_t = \sum_{i=1}^t AAR_{it} \quad (7)$$

Where,

$CAAR_t$ = Cumulative average abnormal return returns up to day ‘t’

t = Time (number of days over which ARs are cumulated)

AAR_t = Average abnormal return for day ‘t’

3.10. Significance Testing for AAR%

The significance of AARs for the event period is tested using T -statistics. The T -statistics are calculated as follows, Assume; $AR_{it} (0, \sigma_i^2)$

$$T(AAR) = AAR_t / \sigma_{AAR_t} \quad (8)$$

Where,

σ_i^2 = Variance of AR in the event period

Hypothesis for this can be stated as,

H1: *There is a significant relationship in AAR%.*

3.11. Significance Testing for CAAR%

The significance of CAARs for the event period is tested using the T -statistics, and they are calculated as follows,

Assume; $CAAR_{it} (0, \sigma_T^2)$

$$T(CAAR) = CAAR_t / \sigma_{CAAR_t} \quad (9)$$

Where,

T = number of days over which AARs are cumulated

Hypothesis for this can be stated as,

H2: *There is a significant relationship in CAAR%.*

4. Empirical Results and Discussion

Table 3 illustrates the daily percentage average abnormal return (AAR%), daily percentage cumulative average abnormal return (CAAR%) realized by the shareholders, and T values for AARs% and CAARs% for the 61-day event window period. Other than those, the table shows the number of events with positive and negative ARs in each day is summarized under the column plus (+): minus (–) sign respectively.

According to Table 3, it is clear that on the event date or the split announcement date (Day t_0) AAR is 15.01% and it is significant at a 1% level. but, including the stock split of 1 for 4500 in Industrial Asphalts Ceylon PLC that eliminated from the sample being an outlier, AAR on the event date was 14.44%. On the announcement date, 92% of the events recorded positive ARs whereas, only 8% recorded negative ARs. The market absorbs positive signals (information that has a positive impact on stock prices) released by corporations’ stock split announcements fairly fast, according to Fama et al. (1969). According to this information, the day of the stock split announcement appears to send a stronger signal to market participants than previous days. This clearly shows that stock split announcements provide market participants with more significant positive information (information that has a positive impact on stock prices). Because of positive AARs of 1.46 percent (only 52 percent of events recorded positive ARs), 1.41 percent, and 5.27 percent on the announcement date, the findings of this study are similar to those of Hua and Ramesh (2013), Chavali and Zahid (2011), and Lukose and Rao (2002). However, in the study of Soyza et al. (2021), while the AAR findings reflect a positive situation before the announcement date, a rapid decline has occurred in both AAR and CAAR, and it has turned negative because 98 percent of the occurrences are negative on the announcement date.

Table 3: Behavior of Average Abnormal Returns (AARs), Cumulative Average Abnormal Returns (CAARs), and *t*-statistics on and Around the Stock Split Announcement Date

Event day	AARs%	T(AARs)	CAARs%	T(CAARs)	+/- Sign	Event day	AARs%	T(AARs)	CAARs%	T(CAARs)	+/- Sign
-30	-0.44%	-0.18	-0.44%	-0.11	7:19	0	15.01%	6.13***	13.84%	3.29	24:02
-29	-0.06%	-0.02	-0.50%	-0.12	10:16	1	-4.05%	-1.65*	9.79%	2.33	12:14
-28	-1.27%	-0.52	-1.77%	-0.42	7:19	2	-0.89%	-0.36	8.90%	2.12	8:18
-27	-0.16%	-0.07	-1.93%	-0.46	23:15	3	-0.72%	-0.30	8.18%	1.95	8:18
-26	-0.33%	-0.13	-2.26%	-0.54	9:17	4	-0.56%	-0.23	7.62%	1.81	6:20
-25	0.22%	0.09	-2.04%	-0.49	12:14	5	-1.62%	-0.66	6.00%	1.43	7:19
-24	-0.02%	-0.01	-2.06%	-0.49	9:17	6	-0.52%	-0.21	5.48%	1.30	9:17
-23	-0.15%	-0.06	-2.21%	-0.53	11:15	7	0.26%	0.10	5.74%	1.36	10:16
-22	0.06%	0.03	-2.15%	-0.51	8:18	8	-0.85%	-0.35	4.89%	1.16	11:15
-21	-0.08%	-0.03	-2.23%	-0.53	23:15	9	1.90%	0.78	6.79%	1.61	16:10
-20	-0.90%	-0.37	-3.13%	-0.74	7:19	10	1.88%	0.77	8.66%	2.06	13:13
-19	-0.68%	-0.28	-3.80%	-0.90	8:18	11	-2.08%	-0.85	6.58%	1.56	6:20
-18	-0.25%	-0.10	-4.05%	-0.96	13:13	12	-2.56%	-1.04	4.02%	0.96	8:18
-17	0.51%	0.21	-3.54%	-0.84	15:11	13	-1.36%	-0.56	2.66%	0.63	5:21
-16	0.74%	0.30	-2.81%	-0.67	11:15	14	-1.25%	-0.51	1.41%	0.34	7:19
-15	2.53%	1.03	-0.28%	-0.07	17:09	15	0.51%	0.21	1.93%	0.46	14:12
-14	0.13%	0.05	-0.14%	-0.03	12:14	16	1.64%	0.67	3.57%	0.85	16:10
-13	-1.14%	-0.47	-1.28%	-0.31	4:22	17	-1.98%	-0.81	1.59%	0.38	9:17
-12	-0.17%	-0.07	-1.45%	-0.35	11:15	18	-1.88%	-0.77	-0.29%	-0.07	10:16
-11	2.23%	0.91	0.77%	0.18	15:11	19	-0.63%	-0.26	-0.92%	-0.22	9:17
-10	-0.88%	-0.36	-0.11%	-0.03	5:21	20	0.52%	0.21	-0.41%	-0.10	14:12
-9	-1.78%	-0.73	-1.89%	-0.45	7:19	21	0.67%	0.27	0.26%	0.06	14:12
-8	-1.42%	-0.58	-3.30%	-0.79	7:19	22	-1.55%	-0.63	-1.29%	-0.31	6:20
-7	-0.35%	-0.14	-3.65%	-0.87	8:18	23	-1.59%	-0.65	-2.88%	-0.69	10:16
-6	2.03%	0.83	-1.62%	-0.38	17:09	24	-0.69%	-0.28	-3.57%	-0.85	9:17
-5	-0.42%	-0.17	-2.04%	-0.49	9:17	25	2.88%	1.18	-0.69%	-0.16	18:08
-4	-0.88%	-0.36	-2.92%	-0.69	11:15	26	3.83%	1.57	3.14%	0.75	18:08
-3	-1.77%	-0.72	-4.69%	-1.12	8:18	27	1.06%	0.43	4.21%	1.00	16:10
-2	-0.59%	-0.24	-5.28%	-1.26	11:15	28	-0.08%	-0.03	4.13%	0.98	10:16
-1	4.11%	1.68*	-1.17%	-0.28	16:10	29	-1.38%	-0.57	2.74%	0.65	11:15
						30	0.19%	0.08	2.93%	0.70	11:15

Note: ***, ** and * indicates significant at 1%, 5% and 10% level of significance based on *t*-statistics.

Table 3 shows a 4.11% AAR (significant at 10%) one day before the announcement date, indicating leakage of the knowledge. This could be because information of stock split declarations reaches the market before the firms make their announcements. There appears to be no way to leverage a split to boost one’s projected returns, as demonstrated by

Fama et al. (1969), unless, of course, inside information about the split or subsequent dividend behavior is known.

This study discovered a negative AAR value of 4.05 percent (significant at 10%) soon after the company split announcement date, indicating the stock market’s informational efficiency. Nobody would be able to achieve

anomalous returns utilizing publicly available knowledge in a semi-efficient market. Fama et al. (1969) found similar results in their study “stock price reaction to stock split,” which found that there was significant market reaction previous to the stock split announcement and that the CAARs tapered off after the announcement day. This study discovered a negative AAR value of 4.05 percent (significant at 10%) soon after the company split announcement date, indicating the stock market’s informational efficiency. Nobody would be able to achieve anomalous returns utilizing publicly available knowledge in a semi-efficient market. Fama et al. (1969) found similar results in their study “stock price reaction to stock split,” which found that there was significant market reaction previous to the stock split announcement and that the CAARs tapered off after the announcement day.

Around the time of the announcement, the positive and negative values of AARs fluctuate, and there is no clear pattern in the behavior. Chavali and Zahid (2011) also discovered that the AARs of firms that engage in stock splits do not follow a consistent trend. AARs are positive 30 percent of the time (9 days) before the announcement date and 36 percent of the time (11 days) after the announcement date. AARs were found to be negative 70% of the time (21 days) before the announcement date and 64% of the time (19 days) after the announcement date in this study. As a result, AARs are negative for a greater number of days during the 61-day event window period than they are positive in both the post- and pre-event days.

Table 4 shows the ARs’ direction on the announcement date, as well as the average number of events that gain

positive or negative ARs on that day. This clearly showed that out of the 26 total occurrences, 24 (92%) had positive ARs. Only two instances (8 percent) had negative ARs, on the other hand. As a result, it is apparent that the total market response rate on the stock split announcement day is good. Hua and Ramesh (2013) found that out of 62 events, 33 (52 percent) had positive ARs and 31 (48 percent) had negative ARs on the announcement date, accounting for a higher number of positive events. But in the study of Soyza et al. (2021), 98% of the events recorded negative ARs where only 2% of the total events account for positive events.

The behavior of AARs and CAARs around the event window period is depicted in Figure 2. It demonstrates that the value of AARs and CAARs has a modest fluctuating yield before and after the event day that is both positive and negative. The graph clearly shows that on the day of the split announcement, significant positive AARs and CAARs are earned, indicating that the market views the stock split news as excellent information related to the firm’s future.

Table 4: Direction of Abnormal Returns (ARs) on announcement date (Day t_0)

Direction	Number of Events	Percentage (%)
Positive	24	92%
Negative	02	8%
Total	26	100%

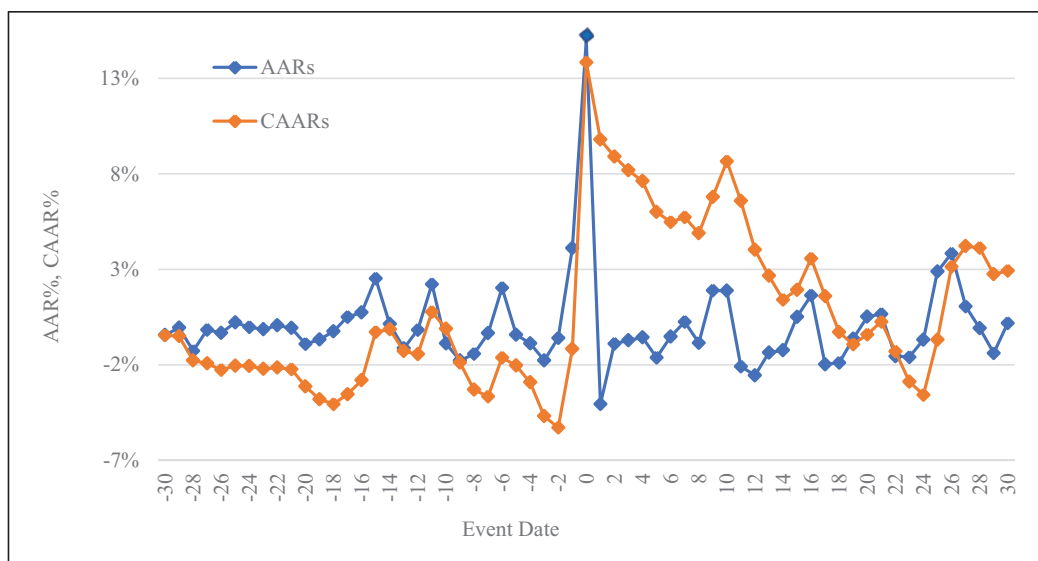


Figure 2: Graphical view of the behavior of Average Abnormal Returns (AARs) and Cumulative Average Abnormal Returns (CAARs) on and Around the Stock Split Announcement Date

5. Conclusion

The study discovered that the stock split announcement day, on which the stock split announcement is made available to market participants, has a significant market reaction. According to the analysis, on the day of the stock split announcement, stockholders can gain 15.01% AARs. On the stock split announcement day, 92% of average events in the sample have positive ARs, while just 8% of the events have negative ARs. As a result, on the day of the stock split announcement, the total market response rate is positive.

Furthermore, evidence reveals that stockholders might generate a positive AAR of 4.11 percent one day before the stock split announcement date. This suggests that insider misuse, or the revelation of price-sensitive information to the market by linked insiders before the formal announcement, as well as other wrongdoing by select market participants, could have an impact.

However, shareholders are unable to gain a positive return immediately after the stock split announcement date, reflecting the market's informational efficiency. This backs up the semi-strong form efficient market theory, which states that market players cannot gain from abnormal returns based on publicly available data. Simply put, this shows that stock prices react so quickly to all public information that no investor can make a profit after the announcement is made.

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