The Stock market reaction to the Unexpected Events in Sri Lanka

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ABSTRACT

This study investigates the stock market reaction to the unexpected events from January 2018 to July 2022 in the Colombo Stock Exchange (CSE), Sri Lanka. It mainly covers catastrophic, political, economic, and pandemic events and their impact on the stock market index using mean-adjusted event study methodology. All Share Price Index (ASPI) was used as a stock market index. The event window period was the pre- and post-event period of 2 days, 5 days, and 15 days, and the estimation period was 100 days. Finally, the event study identified that the stock market reacts positively and negatively to the available information. Therefore, the research concludes that the stock market is semi-strong inefficient.

Keywords: All Share Price Index, Colombo Stock Exchange, stock market reaction, unexpected events, market efficiency

1. Introduction

The stock price is a significant indicator of a country's economic condition (Levine and Zervos, 1998); therefore, stock price fluctuations affect investment decisions and the economy. The role of the stock market in an economy is vital by providing financial intermediation such as mobilization of financial resources, promoting capital allocation, and medium for foreign investment. Therefore, financial analysts always observe the stock market activities and performance. Likewise, investors and sellers in the stock market constantly analyze the movement of stock prices even though predicting the direction of stock price movement is challenging due to the dependency on stock prices (Watanabe, 2008). Several finance theories discuss the prediction of stock price behavior in the future; the leading theories are the Efficient Market Hypothesis (EMH), prospect theory, and rational expectation theory.

The EMH discusses the behaviour of stock prices, initially introduced by Fama (1965). The EMH discusses that a financial market will reflect all available information to investors, and based on the stock price movement, the EMH has three forms: weak form, semi-strong form, and strong form. Prospect theory, also known as loss-aversion theory, introduced by Kahneman and Tversky (1979), describes decision-making under risk. The prospect theory discusses that people are risk averse and choose less risky investments than those offering high returns with high-income volatility. Rational expectation theory (Muth, 1961) explains that the individual investment decision depends on human rationality, available information, and past experiences.

The stock price movement depends on factors such as firm-related factors, macroeconomic factors, and some events that occur nationally and internationally. Whether national or international, the events provide information to the investors to predict stock price movement even though some available information may be predictable, and some are unpredictable. Significant changes in macroeconomic variables, expected and unexpected political events, economic changes, and catastrophic and pandemic events are important events that would influence stock price movements. Changes in macroeconomic variables directly affect a particular sector or individual firm. On the other hand, economic and non-economic factors directly influence stock market activities and stock price movement; conversely, political, catastrophic, and pandemic events indirectly control stock market activities and prices.

Karki (2017) indicates that the investors' economic and political events sentiment also influences stock market activities. Therefore, the investors react according to the available information, such as stock market announcements, company announcements, and other stock market-related information. In addition, unanticipated events in the country significantly affect investors' psychology and stock price movement (Beaulieu et al.,2006; Lamb, 1998; Ramjah, 2013; Syed and Bajwa, 2018). Thus, any unexpected events directly or indirectly influence stock prices more than the expected events because expected events do not cause any sudden shock in the stock market.

Colombo Stock Exchange (CSE) is the only stock market in Sri Lanka consisting of 296 listed companies on March 31, 2022, and globally CSE is one of the developing stock markets that face high volatility risk due to investor behaviour and government interventions (Wang et al., 2021). Further, the information providing adverse shocks

generates higher volatility in stock prices than positive shocks (Morawakage and Nimal, 2015). Therefore, investors always react according to the information that affects the country's stock market activities and political and economic conditions. Several unexpected events occurred recently in Sri Lanka, and that information positively and negatively impacted the stock market. Therefore, the study aims to measure the effect of unexpected events on the All Share Price Index (ASPI) in the CSE from January 2018 to July 2022. The significance of this study is first to help investors understand the direction of stock movement to the unexpected events and indicates to what extent each event impacts the stock market index and second to provide information to the policymakers to make suitable policy for economic development.

The remainder of this paper includes the past literature on stock market reaction to unexpected events, the theoretical framework underlying the proposed models, the research methodology followed by the data analysis results, and a discussion. Finally, the conclusion of the study and policy implication is presented.

2. Literature review

Several researchers have conducted stock price reactions according to various events (Nazir, Younus, and Anwar, 2014; Ramiah, 2013; Goyal and Mittel, 2020). Fama (1965) introduced the EMH; the theory argues that investors do not have an opportunity to earn an abnormal return from stock market transactions and have a chance to get high profits by investing in high-risk stocks. Therefore, each tries to predict the future market value of individual securities from where current important information is almost freely available to all participants (Fama, 1970). The information gathered from various sources is embedded in stock prices immediately.

The EMH believes the stock market entirely reflects stock market-related and public information. However, the EMH controversially discusses the three forms weak (random walk), semi-strong, and strong form. The weak form deliberates that the stock prices cannot be predicted; therefore, stock prices are reflected only on past information. As per the semi-strong, all new publicly available information will reflect the stock price. Finally, according to the strong form, all public and insider information will reflect stock prices (Fama, 1970).

The prospect theory discusses people's psychology that how people make decisions when presented with alternatives that involve risk, probability, and uncertainty. It holds

that people make a decision based on perceived losses or gains. Additionally, the theory argues that people are risk-seeking when the losses are significant and risk-averse when the losses are small. Accordingly, decision-making involves a trade-off between values (Kahneman and Tversky, 1979).

Rational expectation theory does not have an accepted definition; still, the theory assumes that people learn from past mistakes, use available information for decision-making, and understand how the economy works and government policies alter macroeconomic variables. The theory implies that "the forecasts made by agents within the model are no worse than the forecasts that can be made by the economist who has the mode" (Sargent, 2008, 1).

The available information to investors categorizes natural and manmade disasters, political, economic, pandemic, and firm-related events. These events may be expected or unexpected to the investors, but the investors may react differently based on the type of event. The stock price/ return reactions for expected or unexpected events vary. Worldwide unexpected events, natural and manmade disasters, the Three Mile nuclear disaster (Hill and Schneeweis, 1983), 78 fatal aircraft crashes (Barrett et al., 1987), the California earthquake (Shelor et al., 1990), Capital market strike (Kramer and Hyclak, 2002), Challenger space shuttle crash (Maloney and Mulherein, 2003), September 11 attack (Carter and Simkins, 2004), Taiwan Earthquake (Papadakis, 2006), tsunami-2004 (Ramiah, 2013) indicated that these events mostly created a negative impact on stock prices or stock return.

The U.S. financial crisis-2007/08 created a worldwide economic impact. Due to this crisis, countries worldwide reported a significant negative impact on share prices. For example, Jones (2009) indicated that S&P 500 negatively impacted share price, showing more than a 50% decline. In India, a famous economic event, currency demonetization on November 08, 2016, shocked the Indian financial market. In several studies, Narain and Rani (2016); Anoop, Parap, and Reddy (2018); Goyal and Mittel (2020) indicated that unexpected economic events negatively influenced the Indian stock market prices, Sensex, Nifty, and BSE100. Macroeconomic variables, inflation, and level of industrial production are systematically exposed to the SYSE stock exchange stock price; therefore, stock price reacts to the information of macroeconomic indicators (Chen et al., 1986).

Nazir, Younus and Anwar (2014) investigated the impact of political events on stock market return in Pakistan and found that each political event impacts stock return. Further, they noticed that both autocratic and democratic government structures had not had any different influence on stock market return. Bailey et al., (2005) analyzed the political events and stock returns of US-based international equity mutual funds. The findings revealed that the investors earn positive abnormal returns before particular political events. For example, Saudi Arabia's stock market initially reacted to the event. Later, the market strained to absorb the information results and the view that the market could not react according to the event result. This result seems the investors could not get the actual evidence for the event; therefore, the investors were not reacting at the same level and time (Fodol and Aziz, 2019). Countries' political instability has a profound effect on the risk-return structure of most of the sectors, with different degrees. The stock price and volatility primarily affect banks and financial services. In contrast, food and beverages and the construction and materials sectors are the least responsive to political instability. The 2013 military coup is the most pervasive event on the market and sector-specific indices (Ahmed, 2017).

Önder and Simga-Mugan (2006) investigated political and economic events and their impact on two countries' emerging markets, Argentina and Turkey. The results revealed that political and economic events influence both countries' stock markets. Moreover, domestic political events influence the stock market volatility return, and world political events influence trading volumes. Further, rejecting a highly controversial bill in Turkey was a reason for historically high systematic risk (high β's) in this market (Aktas and Oncu, 2006).

A particular company's stock price reacts to firm-related information such as dividend announcements, stock splits, and interim report announcements. The dividend announcement is favorable news to the investors; therefore, the stock price responds positively (Asquith and Mullins, 1983; Darmarathne, 2013). The market adjusts quickly to the stock split announcement, and investors cannot earn an abnormal return (Hua and Ramesh, 2013). Finally, the interim report announcement immediately affects the particular company's stock prices, and these investors get timely information for their investment decision (Abeyrathna, 2016; Dissanayake and Kalainathan, 2021).

The Covid-19 pandemic created a worldwide economic recession. Some countries, the USA, Brazil, Russia, India, and the United Kingdom, were severely affected and reported high Covid-19 cases and death rates (Sayed and Eledum, 2021). Most leading stock markets collapsed during the global pandemic and reported a negative return (Selmi and Bouoiyour, 2020). The airline companies' stock prices were more affected than non-aviation companies (Loh, 2006), and the biotechnology sector exposed a positive return during the outbreak of SARS (Chen et al., 2009).

In Sri Lanka, the different political events differently influenced on ASPI of CSE. Investors overreacted to good political news, such as the end of the civil war (2009) and removing the state of emergency (2011). For a bad event like Katunayake free trade zone strike (2011) and the COPE report released on the Treasury Bond issue (2016), they reacted vice versa (Kumara and Fernando, 2020). Attapattu and Gunaratne (2013) analyzed the impact of parliament and the presidential election on stock return in CSE, and they proved that the Government's market-friendly policy influences the positive sentiment.

The above literature cited a research gap in the Sri Lankan context. The main aim of this study is to analyze the abnormal changes in ASPI returns due to the unexpected political, economic, catastrophic, and pandemic events from January 2018 to July 2022. In 2018 several unexpected events occurred, such as bomb blasts, sudden changes in politics, and the Covid pandemic, even though the previous research measured some political events, presidential elections, and catastrophic events (Attapattu and Gunaratne, 2013; Kumara and Fernando, 2020), civil war (Jayakody, 2017), stock split (Hua and Ramesh, 2013), dividend announcement (Dharmarathne, 2013), Government budget announcement (Edirisinghe, 2017; Kalainathan,2018) and interim report announcement (Dissanayake and Kalainathan, 2021).

3. Methodology

Several political, economic, catastrophic, and pandemic events occurred from 2018 to the early part of 2022, categorized as expected and unexpected. The expected events were excluded from the study, and all unexpected events were covered. The intensity and importance of the events were captured from the leading newspapers (Nazir et al., 2014), social media, and news channels, especially BBC and IBC. The event study methodology was adopted to measure the stock price movement for unexpected events

in the Sri Lankan Stock Market, and the mean adjusted return model was employed (Ismail and Suhardjo, 2001; Kumara and Fernando, 2020; Nazir et al., 2014). The political, economic, catastrophic, and pandemic dates were considered event days (t = 0). From the event date, the event window was calculated as pre-event and post-event two, five, and fifteen days (t-2 to t+2, t-5 to t+5, and t-15 to t+15) to capture the reaction on the stock price.

Before the event window, the estimation period is the time interval used to calculate the expected return of the stock price index. Literature used different estimation periods to calculate the expected stock market return. Most of the literature consists of 100 days, 120 days, 150 days, and 200 days (Attapattu and Gunaratne, 2013; Kumara and Fernando, 2020; Nazir et al., 2014). A too-long estimation period may absorb noisy information; therefore, to estimate the expected return in this study, the researcher used an estimation period comprising 100 days, measured from day -116 prior to the event date to -16.

The ASPI was considered to study the stock price reaction to particular political, economic, catastrophic, and pandemic shocks. Therefore, the daily stock price index from August 2017 to August 2022 was collected from the Colombo Stock Exchange website (www.cse.lk).

The following table summarizes the unexpected event and event date, description, and type.

Table 1: Unexpected events occurred during the period from August 2017 to August 2022

Sr. no	**Event Date**	**Event description**	**Type of Event**
1.	February 22, 2018	Anti-muslim riots occurred in the town of Kandy, Sri Lanka, between Sinhalese and Muslim groups.	Catastrophic
2.	October 26, 2018	Sri Lankan Prime Minister Ranil Wickremasinghe was replaced by former President of Mahinda Rajapaksa, causing a constitutional crisis.	Political

3.	November 9, 2018	Maithiripala Srisena dissolved the Sri Lanka parliament by proclamation.	Political
4.	December 16, 2018	Ranil Wickremasinghe was reinstated as Prime Minister of Sri Lanka	Political
5.	April 21, 2019	Easter Sunday bombing at Catholic Churches and Hotels	Catastrophic
6.	January 27, 2020	The first reported Covid-19 case – a Chinese woman	Pandemic
7.	February 19, 2020	Sri Lanka decided to withdraw its co-sponsorship on calling for an investigation into alleged war crimes in the Sri Lankan civil war by the Human Right Council of the U.N.	Political
8.	March 11, 2020	The first reported Covid-19 Sri Lankan victim identified	Pandemic
9.	March 04, 2022	Flexible exchange rate policy	Economic
10.	May 12, 2022	Ranil Wickremasinghe was appointed as Prime Minister of Sri Lanka	Political
11.	July 20, 2022	Ranil Wickremasinghe was elected as the 8th Executive President	Political

Source: News channels BBC and IBC

Hypothesis

H_1. The unexpected events have a significant positive effect on stock returns in the CSE

Method of data analysis

The following steps are applied to test the effect of unexpected events.

The market index return was calculated as follows.

$$R_t = \frac{P_t - P_{t-1}}{P_{t-1}}$$

Where:

R_t = Return of a stock index on period t

Pt = Market index on period t

Pt_{-1} = Market Index at period $t-1$

The expected return of the share price index was calculated using the following equation.

$$R^* = \left(\frac{1}{T}\right)\sum_{t=1}^{t} \quad R_t$$

Where:

$R^* = Expected\ Share\ Index$

$T = Number\ of\ days\ in\ the\ estimation\ period$

$t = Market\ index\ return\ on\ the\ day\ t\ of\ the\ estimation\ period$

The abnormal return of the stock price index on a particular day was calculated as follows:

$$AR_t = R_t - R^*$$

Where:

$$AR = Abnormal\ Return$$

The average abnormal return of pre and post-event periods was calculated.

$$AR^*_{Pre} = \frac{\sum_{t=-k}^{t=-1} \quad AR_{Pre,t}}{n}$$

Where:

$$AR^*_{Pre} = Average\ abnormal\ return\ before\ the\ event\ day$$

k and n = *Number of days taken before the event day*

$$AR^{*}_{Post} = \frac{\sum_{t=k}^{t=1} \quad AR_{Post,t}}{n}$$

Where:

K and n = *Number of days taken after the event day*

The pooled standard error is calculated as follows:

$$\sigma_{Pre} = \sqrt{\frac{\sum_{t=-k}^{t=-1} \quad \left(AR_{Pre,t} - AR^{*}_{Pre,t}\right)^{2}}{n-1}}$$

And:

$$\sigma_{Post} = \sqrt{\frac{\sum_{t=k}^{t=1} \quad \left(AR_{Post,t} - AR^{*}_{Post,t}\right)^{2}}{n-1}}$$

$$\sigma_{Pre-post} = \sqrt{\left(\frac{(n_1-1)\sigma_1^2 + (n_2-1)\sigma_2^2}{n_1+n_2-1}\right)\left(\frac{1}{n_1}+\frac{1}{n_2}\right)}$$

The formula for the t-statistic is as follows:

$$t = \frac{AR^{*}_{post} - AR^{*}_{Pre}}{\sigma_{Pre-Post}}$$

The significance of *t*-statistics indicates an inefficient level of the stock market. According to the EMH, investors cannot earn abnormal returns due to the available information because this insignificant level of t-statistics is a shred of evidence for an efficient market.

4. Results and discussion

Table 2 provides *t*-values of each event at 2-day, 5-day, and 15-day event windows.

Table 2: *t*-values at event window periods

S.	Event	*t*-values

No		2-day	5-day	15-day
1.	Anti-muslim riots	-0.23896	-1.54215	**-5.04564*** **
2.	Prime Minister Ranil Wickremasinghe was replaced by Mahinda Rajapaksa.	1.70986	**2.50710*** **	1.80416
3.	Parliament was dissolved.	**8.837587*** **	-0.02263	**3.67882*** **
4.	Ranil Wickremasinghe was reinstated as Prime Minister.	-1.23679	-1.55899	**-4.73473*** **
5.	Easter Sunday bombing.	-1.19788	-1.41412	**1.9606*** **
6.	The first reported Covid-19 case – was a Chinese woman.	**-12.64968*****	-1.508186	-1.16152
7.	Withdraw co-sponsorship of U.N. Human Right Council.	-1.80462	-1.78983	**-7.11366*** **
8.	First reported Covid-19 case – Sri Lankan.	0.351530	**-2.52435*** **	0.661798
9.	Flexible exchange rate policy.	**-2.99813*** **	-0.66506	0.224905
10.	Ranil Wickremasinghe was appointed as Prime Minister.	**6.840531*** **	**2.135827*** **	**2.84808*** **
11.	Ranil Wickremasinghe was elected as the 8th Executive President.	**-2.84480*** **	**-2.45000*** **	**3.69126*** **

*** shows a significant level at 5%

Source: Survey Data

Table 3: Average Abnormal return of the event window periods

S. No	Event	*AR**					
		2-day		5-day		15-day	
		Pre	Post	Pre	Post	Pre	Post
1.	Anti-Muslim riots	-0.001	-0.001	0.000	-0.001	0.001	-0.001

2.	PM Ranil Wickremasinghe was replaced by Mahinda Rajapaksa	0.001	0.012	0.001	0.010	0.001	0.002
3.	Parliament was dissolved	-0.010	0.002	0.000	0.000	-0.002	0.001
4.	Ranil Wickremasinghe was reinstated as Prime Minister	0.001	-0.002	0.001	-0.001	0.002	-0.000
5.	Easter Sunday bombing	0.002	-0.017	0.001	-0.005	0.002	0.011
6.	The first reported Covid-19 case – a Chinese woman	0.005	-0.009	0.001	-0.002	-0.002	-0.002
7.	Withdraw co-sponsorship of U.N. Human Right Council	0.000	-0.004	-0.002	-0.006	-0.001	-0.012
8.	First reported Covid-19 case – Sri Lankan	-0.018	-0.010	-0.009	-0.030	-0.006	-0.004
9.	Flexible exchange rate policy	-0.021	-0.034	-0.003	-0.013	-0.010	-0.010
10.	Ranil Wickremasinghe was appointed as Prime Minister	0.001	0.047	-0.004	0.016	-0.009	-0.004
11.	Ranil Wickremasinghe was elected as the 8th Executive President	0.020	0.009	0.014	0.006	0.009	0.016

Source: Survey data

Two catastrophic events were reported from January 2018 to August 2022. The first event was a series of anti-Muslim riots that started on February 22, 2018, in the Kandy district and caused violence against one community in Sri Lanka. An incident reported in Teldeniya, Kandy, was triggered by an attack on a Sinhala Buddhist truck driver by four Muslim youths after a traffic dispute. The victim died on March 3, and on 4th March Sinhala Buddhist hardliners mobilized their mobs and attacked Muslims' properties. This event initially, 2-day and 5-day, does not significantly impact stock return even though it showed a statistically significant adverse reaction on stock return in 15-day. The average abnormal return of pre-5-day and 15-day of the event period showed a

positive return, and after all, event window periods indicated a negative average abnormal return.

The second catastrophic event during the study period was the Easter Sunday bombing which caused economic and political shock. Due to the bombing of the Catholic churches in Negombo, Batticaloa, and Colombo and three luxury hotels in Colombo, more than 250 civilians were killed, and more than 500 were severely injured, including foreigners. This bombing seriously damaged the activities and return of several sectors, especially the tourism industry, which was tremendously affected while adverse spillover effects were reported in other sectors (Central Bank annual report, 2019). The event had an insignificant negative effect on the 2-day and 5-day periods, and a significant positive impact at a 5% level in the 15-day proves the stock market returned to normal. The pre-event window period average abnormal return was positive, but the post-event average abnormal return was negative. This result shows that the unexpected catastrophic event negatively affected the stock market return, and the stock market immediately reacted to the devastating events.

Several political events created an economic disaster during the study period. First, in a constitutional crisis, Mahinda Rajapaksa was sworn in as prime minister after the country's President sacked Ranil Wickremesinghe on October 26, 2018. Surprisingly, the t-values were positive during 2-day, 5-day, and 15-day periods and the average abnormal returns were also positive during the pre and post-event window periods. In addition, the average abnormal return during the event window period was positive. These results proved that the stock market showed a significant positive reaction, proving that the investors expected an economic resolution after Mahinda Rajapaksa was appointed Prime Minister.

Two weeks later, on November 09, 2018, Maithiripala Srisena dissolved the Sri Lanka parliament. This event immediately created a statistically positive reaction to the stock market return. Later, 5 days showed an insignificant negative response, and 15 days showed a statistically significant positive impact on the stock market return. The average abnormal return was positive during pre-event days and negative during post-event days. The results show that investors closely observe the stock market and expect political changes, which would create a sustainable environment in the stock market to invest in the stock market.

Ranil Wickremasinghe was reinstated as Prime Minister on December 16, 2018. This political event exposed a negative impact on the stock market return. The t-values of 2-day, 5-day, and 15-day show a negative effect even though the 15-day t-value was statistically significant at a 5% level, proving that investors take time to evaluate the impact of the political leadership changes on their investment decision. Further, in the pre-event period, the average abnormal return was positive. However, then, it was negative in the post-event period.

Covid-19 created a pandemic worldwide and courses for an economic crisis in developing countries. In Sri Lanka, the first reported case was a China woman. Before and after the first reported case, the stock market did not react to Covid-19. However, in the second case, a Sri Lankan infected by Coronavirus and notified on March 10, 2020, negatively affected the stock market index even though the 15-day t-value proved positive. Therefore, the post-15-day event period average abnormal return indicated a positive value and other periods stated a negative value. These results demonstrated that investors turned their investments to the stock market due to the lockdown of the country and low-interest rates in banks.

Former President Mahinda Rajapaksa informed the Government of Sri Lanka to withdraw from the co-sponsorship process about resolution 30/1, effective February 19, 2020. The resolution 30/1 called for an independent investigation with foreign judges and prosecutors to probe war crimes allegations. This event immediately influenced an adverse reaction in the stock market return and proved a significant negative *t*-value for all event window periods. Compared to the per-event window period, the post-event window period abnormal return was high-negative.

An economic crisis was reported in early 2022 in Sri Lanka. This crisis started on Easter Sunday attract, April 21, 2019. First, this explosion caused a sudden decline in tourist arrivals and drained foreign exchange reserves. Second, the Government elected in the latter part of 2019 cut and abolished taxes. The Value-added tax (VAT) rates from 15% to 8% and corporate tax rates from 28% to 24% were reduced.

Further, other abolished indirect taxes were nation building tax, the pay-as-you-earn tax (PAYE tax), and economic service charges. Due to these tax cuts, the loss of Gross Domestic Product (GDP) was about 2% (Ramakumar, 2022). In addition to that,

COVID-19 cases were reported, a lockdown was imposed, and the economy was affected from March 2020. In April 2021, all fertilizer imports were banned entirely, and a 100% organic farming nation was declared to prevent the drain of foreign exchange reserves. Then the Government permitted fertilizer import in November 2021 even though there was a drastic fall in agricultural production and more imports became necessary. Due to the fertilizer shortage, a fall in the productivity of tea and rubber also led to lower export income. Therefore, the foreign reserves drastically declined and caused to foreign reserve shortage to import food and other commodities.

Further, Russia and Ukraine's war forced crude oil prices to hit the world market. Consequently, the Government announced a flexible exchange rate policy on March 4, 2022. The flexible exchange rate policy imposed a statistically significant negative t-value in the 2-day event window period and an insignificant negative t-values in the 5-day and 15-day event window period. However, the average abnormal return in the pre and post-event periods was negative except pre-5-day in all event window periods.

In May 2022, inflation rose to 29.8% in Sri Lanka. Due to the 'Galle Face Protest,' Prime Minister Mahinda Rajapaksa resigned on May 9, 2022, and former prime minister and Member of Parliament Ranil Wickremasinghe was appointed Prime Minister of Sri Lanka with effect from May 12, 2022. Soon after this appointment, the stock market indicated significant positive t-values on 2-day and 5-day. Positive AR value during the 2-day pre-event period designates information leakage or new expectation regarding the new prime minister. These events motivated the high stock price. In post-event periods, positive AR values stipulate that the investors expect some economic resolution after the arrival of the new Prime Minister, Ranil Wickremasinghe. This result shows that the immediate impulse response of the investors in crisis time was high and drastically reduced within a short period.

Since early January 2022, the high price of food and other commodities, medicines, and transport costs have been leading to mass starvation. Due to fuel deficiency, the transportation services, private and Government organizations' activities, and mobilization of people were severely affected; therefore, the country went on a virtual lockdown. Schools have been closed, and public sector institutions have been instructed to call only "essential staff." These conditions brought widespread anger against the Government to a boiling point. Therefore, a "massive people's protest" on July 9, and

President Gotabaya Rajapaksha announced that he would quit on July 13, 2022. Finally, the executive President Gotabaya Rajapaksha resigned on July 14, 2022, and Ranil Wickremasinghe was elected as the 8th Executive President of Sri Lanka by Sri Lankan lawmakers on July 20, 2022. The result of the presidential election negatively affected stock market return on 2-day and 5-day event window periods and had a statistically positive impact on the 15-day event window period. The positive AR values during the post- and pre-event periods represented information leakage to investors.

5. Conclusion

The stock market index is one of the imperative indicators of the country's economic condition. CSE is an emerging market and was ranked by Bloomberg as the best-performing market in the world in 2010, even though from 2018, numerous unexpected political, economic, pandemic, and catastrophic events were reported in Sri Lanka. Those events caused severe damage to the economic condition and led to an economic crisis from January 2022 onwards. Therefore, this study aims to identify each unexpected event's impact on the stock price movement from February 2018 to May 2022. The event study methodology (mean adjusted return model) results revealed that all events other than the first Covid-19 significantly affect stock market prices. Two catastrophic events were reported during the study period that negatively affected stock market prices. Most of the unexpected events during the study periods were political events. All events significantly affected stock market prices, even though some events motivated high stock price movement and some adversely affected stock market prices. The first reported Covid-19 case from Sri Lankan citizens and the economic policy announcement of a flexible exchange rate positively affected the stock market.

According to the event study methodology, the Sri Lankan stock market reacts to all past available information. The stock market investors in the CSE have great confusion regarding each unexpected event because, after a few days, the investors observe the event's impact and then decide. This reaction is similar to the semi-strong form; therefore, the study concludes that the Colombo Stock Exchange is semi-strong and inefficient.

6. Contribution to existing knowledge and policy implication

The study provides light on the pathway to discovering what moves stock prices and significant events to be considered by investors before making investment decisions and by governments in formulating policies to develop the stock market development. Further, an essential finding of the empirical analysis suggests that political uncertainty, economic problem, catastrophic events, and the Covid-19 pandemic profoundly affect the stock return of ASPI, with different degrees of intensity. Although different investors, local and foreign, have different needs and risk preferences. Therefore, the study supports getting the idea of making an investment decision.

The findings have practical implications that help investors and policymakers. The more important implication is political and economic stability. The political instability more or less disturbs business and investment activities. Therefore, there is a need for genuine constitutional changes to ensure democratic reforms, including solutions to the ethnic issues in Sri Lanka, proper regard for human rights, and the rule of law; economic reforms to ensure economic stability, which have the highest priority of policymakers to secure a favourable investment climate and to foster investor confidence. Practically, any policy measures accepted by the Government would be pointless unless coupled with appropriate measures to fulfil people's long-awaited aspirations for political reform, social justice, and economic equality.

7. Limitations of the study

1. Several expected and unexpected events were observed during the study period. However, the unexpected events were only considered because the expected events, like the presidential and other elections, might give a prior expectation to the investors.
2. Some unexpected events, such as the Covid-19 lockdowns and the massive people's protests in Colombo, continued for several days. The long-day events' impact on stock price may differ from the one-day event. Therefore, long-day events were not considered.
3. Only a one-day economic event, the flexible exchange rate policy, was focused on. Therefore, other continuous economic events were not accounted for in this study.

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