

## THE REACTION OF SHARE PRICES TO THE ANNOUNCEMENTS OF RIGHT ISSUES AND DEBENTURE ISSUES: EVIDENCE FROM A FRONTIER MARKET

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### Abstract

*Employing the event study methodology, this research probes the response of share prices to announcements of rights issues and debenture issues within the Colombo Stock Exchange. The market model, a quintessential tool for estimating abnormal returns, was harnessed to scrutinize samples encompassing rights issue announcements (n=85) and debenture issue announcements (n=106). These events transpired within the period spanning 2012 to 2019, providing a context post-Global Financial Crisis and pre-COVID-19 pandemic. The findings evince a notable negative reaction of share prices concurrent with the disclosure of rights issuance on the announcement day. Conversely, a non-significant positive reaction was observed for share prices on the debenture issue announcement date. The examination of the selected sectors' share price responses to both rights issue announcements and debenture issue announcements yielded mixed outcomes. Additionally, the results unveil a discrepancy with the semi-strong form of the market efficiency hypothesis, indicating the Sri Lankan Stock market does not adhere strictly to this theoretical proposition. Consequently, this study furnishes crucial insights into the dynamics of share price reactions in frontier markets like Sri Lanka, thereby contributing to the broader discourse on market efficiency.*

**Keywords:** Colombo Stock Exchange; Debenture Issue Announcements; Event Study; Right Issue Announcements; Market Model

**JEL:** G100, G140, G190

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## **1 Introduction**

The central objective of the present investigation is to scrutinize the trajectory of share price responses to rights issue and debenture issue announcements within the context of the Colombo Stock Exchange. Existing theoretical frameworks suggest a dichotomous price response: a downward trend for rights issue announcements and an upward trend for debenture issue announcements (Edirisinghe, 2013). Nonetheless, these outcomes appear to be contingent on the underlying market performance characteristics. A comprehensive review of the extant literature pertaining to rights issue announcements and debenture issue announcements reveals a conspicuous dearth of research within the context of frontier markets. Therefore, this event study analysis is intended to fill this gap by focusing specifically on the Sri Lankan market context, which is classified as a frontier market. In pursuing these aims, the study seeks to augment the scholarly discourse on share price responses to rights issue and debenture issue announcements, while also providing valuable insights for market participants operating within similar frontier markets.

Rights issues constitute a significant conduit for corporations to gather capital, their proclamations being imbued with substantial informational significance (Eckbo & Masulis, 1992; Marsh, 1979). Rights issues serve as a primary avenue for businesses in numerous nations to amass fresh capital, a practice substantiated by studies from various regions including Australia (Balachandran et al., 2007), China (Wang et al., 2006), Greece (Tsangarakis, 1996), and extending even to more remote markets such as New Zealand and Norway (Marsden, 2000; Anderson et al., 2006; Bøhren et al., 1997). Conversely, in the United States, industrial companies predominantly depend on firm-commitment underwritten offers or seasoned equity offerings (SEOs) as their conduit to equity finance. This practice has been typically associated with a negative market response (Mikkelsen & Partch, 1986; Barclay & Litzenberger, 1988; Hansen, 1989; Eckbo & Masulis, 1992). This trend of price depreciation has prompted a proliferation of theories in an attempt to elucidate it, ranging from the signaling hypothesis of asset overvaluation (Myers and Majluf, 1984), the tax advantage of debt (DeAngelo & Masulis, 1980), to agency costs and the risk of imprudent investments (Jensen & Meckling, 1976; Stulz, 1990) and the price pressure hypothesis (Corwin, 2003). A more recent layer of understanding has been introduced by Kim and Purnanandam (2006), positing that negative investor response is elicited when they suspect

management may misuse the proceeds, engaging in corporate acquisitions that erode value or investments with negative Net Present Value. Interestingly, when management and investor interests are in harmony, the adverse price response is reportedly negligible during the announcement period of the offer.

Complementarily, advanced domestic bond market is crucial for the cultivation of a robust, well-calibrated financial market within any given economy. This is facilitated via the dispersion of intermediation risks among a broad array of institutions and market participants, coupled with the gains in efficiency achieved through the provision of competitive financing alternatives (Chabchitichaidol & Permpoon, 2002). Corporate bond issuance holds substantial importance in shaping market stability and influencing asset prices due to inherent risks of asset price inflation (Ahiadorme et al., 2018; Brana & Prat, 2016; Chin & Abdullah, 2013; Kishor & Marfatia, 2013). Despite myriad studies affirming bond issuance's effect on share price returns (Kang, 1996; Chen et al., 2005; Ashhari et al., 2009; Chin & Abdullah, 2013), the definitive impact of bond issuance announcements on equity cumulative abnormal returns remains unclear (Liao et al., 2017; Dutordoir et al., 2016; Sherif & Erkol, 2017). Notably, past studies mainly consider pre-financial crisis periods. Thus, exploring corporate bond issuance announcements in frontier markets during the post-Global Financial Crisis and pre-COVID-19 pandemic era promises fresh insights, benefiting both academic discourse and policymaking.

Additionally, a sizable fraction of these former studies delving into the ramifications of bond issuance announcements on share price returns across diverse markets, inclusive of emerging markets, predominantly concentrated on timeframes predating the financial crisis. Consequently, executing a holistic analysis of the announcement effect of corporate bond issuances and right issuances on share price returns within a frontier market context, in the interim post-Global Financial Crisis yet pre-COVID-19 pandemic, is anticipated to constitute a substantive augmentation to the current corpus of literature. This examination will not only elucidate the nuanced complexities of market reactions within this unique timeframe, but also proffer invaluable insights for policy formulators navigating these frontier markets.

The insights derived from this inquiry are poised to enrich both the academic landscape and the domain of market practitioners by facilitating an enhanced comprehension of how share prices in certain markets react to corporate bond pronouncements. Furthermore, the findings stand to refine decision-making processes, acting as a strategic compass for the management of companies listed

in frontier markets, like Sri Lanka and others of similar market character. This guidance will help in gauging the potential positive ramifications of their bond issuance and rights issuance strategies on share prices. In addition, this research endeavors to equip shareholders with valuable knowledge concerning potential share price returns in the aftermath of corporate bond issuance announcements. The sectoral examination undertaken in this study further serves to illuminate the decision-making process for investors, offering insights that could be instrumental in shaping their investment strategies.

The paper is organized as follows: the next section explains the literature review. Then, the results of the event study analysis around debenture and rights issue announcements for the entire market and the chosen sectors are presented, and the section that follows explains the data and methodology used. In the last section, the results are outlined and the study's ramifications are discussed.

## **2 Literature review**

The corpus of scholarly research investigating share price responses to rights issue and debenture issue announcements is vast and extensive. Myers and Majluf (1984), Gunathilaka and Kongahawatte (2011), and Connelly et al. (2011) form the bedrock of this domain, asserting that firms' equity issuance often correlates to enticing investment opportunities, yet triggering a concomitant stock price drop due to increased share volume.

Analysing the market efficiency of the Colombo Stock Exchange (CSE), there exists a division. Rehman et al. (2016) contend for its weak-form efficiency - promptly absorbing all public information - while Fernando and Gunasekara (2018), Abeysekera (2001), and Nisar and Hanif (2012) discern predictability, suggesting semi-strong form efficiency. When examining rights issue announcements, the literature portrays a complex narrative. AliSabri (2004) and Edirisinghe (2013) observed a negative impact on share prices during the event window period, while Ramesh and Rajumesh (2014) highlighted a positive market response. A common issue, suggested by AliSabri (2004) and Hua and Ramesh (2013), is the information leakage before the official announcement, evidenced by abnormal returns.

The literature is also divided on the effect of rights issue announcements on share prices. While studies like Asquith and Mullins (1986), Baker and Wurgler (2000), and Medeiros and Matsumoto (2015) align with the negative effect theory, others like Pathak and Giri (2008), Marisetty et al.

(2008), and Shahid et al. (2010) detected a positive market response. In more recent works, both Van Der Merwe (2016) on the Johannesburg Stock Exchange (JSE) and Ramya and Bhuwaneshwari (2018) on the National Stock Exchange of India (NSE) validated the negative stock price impacts post-announcement due to perceived negative signals.

Debenture issue announcements' impact presents an intriguing scenario. Marshall, McCann, and McColgan (2018) found a mostly positive market response, whereas Edirisinghe (2013) reported a consistent negative reaction in the CSE context. Berninger et al. (2021) added another layer of complexity, underscoring the influence of overall economic conditions and the maturity of the corporate debt market. There's a rich diversity in findings on this matter. Positive market reaction to debenture issue announcements is emphasised by Brounen and Eichholtz (2001), Cai and Lee (2013), and Bayless & Chaplinsky (2014). Conversely, Dann and Mikkelsen (1984), Eckbo (1986), and Spiess & Affleck-Graves (1999) reported significant negative share price reactions. Meanwhile, Castillo (2004) detected no significant abnormal returns. Recent studies like Davydov et al. (2014) and Godlewski et al. (2011) indicated negative cumulative average abnormal returns (CAARs) post straight bond issues in Russia. Wang and Xu's (2021) research on the Chinese market unveiled varied responses depending on the type of bond issued.

There's broad agreement on the negative impact of rights issues, while debenture issues elicit diverse reactions. It's evident that factors such as firm characteristics, market conditions, investor perceptions, geographical and economic contexts, type of debt issued, and market maturity substantially influence the outcomes.

### **3 Methodology**

Leveraging the methodology of event studies, the current investigation probes the ramifications of rights and debenture issue announcements on share prices within the scope of the Colombo Stock Exchange. Event study methodology stands as a critical pillar in the landscape of strategic management research, offering rigorous analytical tools to gauge the financial implications ensuing from an array of corporate disclosures. The concept of an 'event' within this framework typically encapsulates the dissemination of information through media channels, imparting knowledge on corporate or governmental initiatives to the market constituents. The core objective of event studies revolves around discerning whether particular incidents give rise to abnormal stock returns, a parameter indicative of the deviation between the empirically observed returns

and the anticipated returns, as dictated by a specified stock return model (Brown & Warner, 1985; Campbell, Lo, & MacKinlay, 1997; Peterson, 1989). In the milieu of finance research, event studies endure as a pivotal instrument for empirical inquiry, owing to their potent ability to elucidate the financial reverberations of specific corporate actions (de Jong and Naumovska, 2016). The employment of such a methodology in the present research thus seeks to illuminate the market's response to rights issues and debenture issue announcements, unveiling intricate dynamics and potential predictors of stock price performance in the Colombo Stock Exchange.

The research sample for this study encompasses a period from January 2012 through December 2019, predating the onset of the Covid-19 pandemic. During this specified timeframe, a total of 85 rights issue announcements and 106 debenture issue announcements were duly selected as the empirical basis for this investigation. The decision to deliberately confine the dataset to announcements made prior to December 2019 was enacted to obviate the influence of the Covid-19 pandemic on the stock market, thereby ensuring that the results generated from this study are devoid of the pandemic's potential distortions on market behavior. All announcements excluding non-available share prices for the estimation period (200 days) are included as the sample. Data collection focused on the secondary data type that was further analyzed by the event study methodology. The daily data and all share price index values are collected from the Colombo stock exchange.

The estimation window is used to calculate the effect of security concerns on the share price on the day of the occurrence (-40, +40). (-241, -41). In this study, the day of the actual public release is taken as the event date. Therefore, an estimation window that uses the event window return will also be required (MacKinlay, 1997). Figure 1 elaborates on the estimation window and the event window.

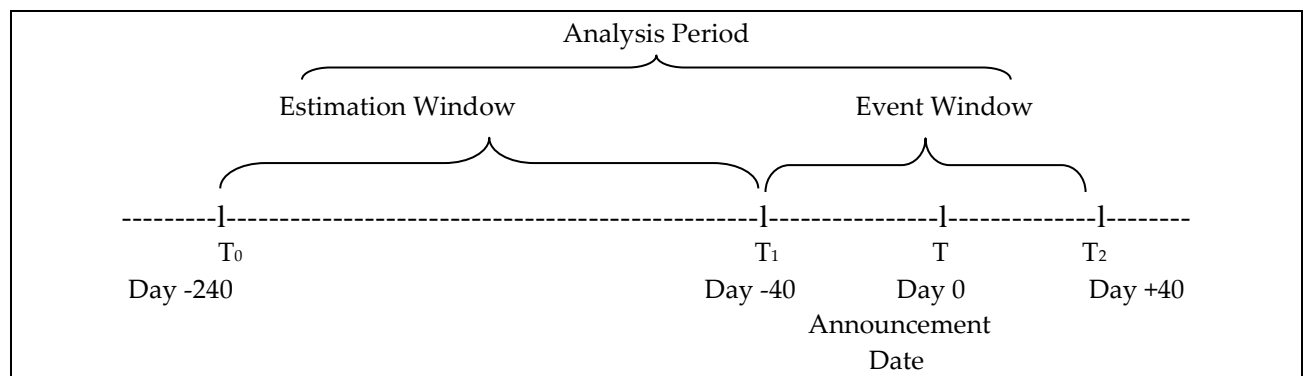


Figure 1: Analysis Period.

The study considered those companies that make public announcements related to the right issues and debenture issues. The sample of the right issue and debenture issue announcements are listed in Table 1 and Table 2 sector-wise. The Banking, Finance, and Insurance sector get more weight in the sample of right issue announcements and debenture issue announcements during the sample period.

Table 1. Number of Right Issue Announcements.

<b>Sectors</b>	<b>No. of right issue announcements</b>
Banks, Finance & Insurance	41
Hotels & Travels	12
Manufacturing	7
Land & Property	5
Stores & Supplies	3
Plantations	3
Diversified	2
Services	2
Trading	2
Investment Trust	2
Footwear and Textiles	2
Construction and engineering	2
Beverage Food & Tobacco	1
Power & Energy	1
<b>Total</b>	<b>85</b>

Table 2. Number of Debenture Issue Announcements.

<b>Sectors</b>	<b>No. of debenture issue announcements</b>
Banking, Finance, and Insurance	83
Trading	7
Diversified	5
Food beverage and tobacco	4
Construction and engineering	2
Telecommunication	1
Plantation	1
Stores and suppliers	1
Manufacturing	1
Health Care	1
<b>Total</b>	<b>106</b>

Using Equation 4, the Event Study Methodology uses the difference between Actual Return and Expected Return to identify Abnormal Returns for each stock in the sample. Equation 1 is represented in the market model under the event study methodology and may be used to calculate

the expected return for given security. Equation 2 yields the security's actual return, whereas Equation 3 yields the market return. Then, using Equation 5, the daily average abnormal returns (AAR) for each stock can be calculated when the abnormal returns for all securities are combined. When the AARs are combined over time, the cumulative average abnormal return (CAAR) can then be calculated using Equation 7. Finally, the t statistic is employed in accordance with Equation 6 to assess the significance of AAR.

$$E(R_{it}) = \alpha_i + \beta_i R_{mt} \quad (1)$$

Where:

$R_{it}$  = the rate of a return of stock "i" on the day "t" in the window period,

$R_{mt}$  = the rate of actual return on the market on the day "t,"

$\alpha$  = the intercept term (alpha coefficient) of security "i",

$\beta_i$  = slope of a straight line (beta coefficient) of stock "i" and

$e_{it}$  = regression error term of security "i" on the day "t".

$$R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}} \quad (2)$$

Where:

$R_{it}$  = the rate of a return of stock "i" on the day "t" in the window period,

$P_{it}$  = market closing price per share "i" on day "t"

$P_{it-1}$  = market closing price per share "i" on the day "t-1".

$$R_{mt} = (I_t - I_{t-1}) / I_{t-1} \quad (3)$$

Where:

$R_{mt}$  = the rate of actual return on the market on the day "t",

$I_t$  = ASPI on the day "t" and

$I_{t-1}$  = ASPI on the day "t-1".

$$AR_{it} = R_{it} - E(R_{it}) \quad (4)$$

$AR_{it}$  = abnormal returns for a firm "i" at the time "t",

$R_{it}$  = the rate of the actual return of stock "i" on the day "t" in the window period and

$E(R_{it})$  = expected normal returns for the firm "i" at a time "t" in the window period.

$$AAR_t = \frac{1}{N} \sum_{i=1}^N AR_{it} \quad (5)$$



Where;

$AAR_t$  = average abnormal return for day "t" in the window period,

$N$  = number of events in the sample.

$$T(AAR_t) = AAR_t / \sigma(AAR_t) \quad (6)$$

Where;

$T(AAR_t)$  = Calculated t value (AAR),

$AAR_t$  = average abnormal return on day "t" and

$\sigma$  = standard deviation of  $AAR_t$ .

$$CAAR_t = \sum_{i=-t}^t AAR_t \quad (7)$$

Where:

$CAAR_t$  = cumulative average abnormal return on the day "t"

Generalized event studies indicate that prices react to new information as anticipated in a market with rational participants. It is anticipated that event studies will continue to be a crucial instrument utilized often in economics and finance as time goes on (MacKinlay, 1997).

## 4 Results and Discussion

### 4.1 Right Issue Announcements

Table 3 displays the Average Abnormal Returns (AAR), Cumulative Average Abnormal Returns (CAAR), and their statistical significance from ten days before to ten days after right issue announcements. The data reveals both positive and negative returns around the event date, indicating mixed investor responses to the announcements. Specifically, the AAR for the event day (day '0') was -0.0153%, and -0.0312% on the day after the event. These returns are statistically significant at a 5% level of confidence. However, the t-statistic for the AAR does not corroborate this statistical significance.

Unlike the AAR, the CAAR exhibited positive values before and on the event day, and negative values thereafter. The t-statistic for CAAR implies statistical significance six days before and after the event, suggesting possible information leakage before the right issue announcement. Figures 2 and 3 graphically portray the AAR and CAAR for the full analysis period and the event period, respectively. The highest and lowest AAR values were 0.0147% and -0.0312%, while the extreme CAAR values were 0.0395% and -0.0654%. These values, however, were statistically insignificant at a 5% significance level. Both figures show a sudden decline after the event day, indicating swift investor reactions to the announcements. Despite the statistical significance of the

CAAR results, the downward trend of CAAR on and after the event day suggests negative reactions. Figure 3 graphically represents these findings, showing both positive and negative investor responses. The CAAR values were positive before the announcement day, but after the announcement, they transitioned to a negative trend, with statistically significant values on the event day.

Table 4 provides the CAAR and t-statistic values for each window period of the right issue announcements. It shows positive CAAR for the periods of (-40, -1) and (-30, -1), but these are statistically insignificant at a 5% level. All other window periods recorded negative CAAR values. Notably, the cumulative average abnormal return for the forty days post-event window period is statistically significant. In summary, while the AAR shows negative but statistically significant market responses on the event day and the following day, the CAAR reveals a positive trend before the event day, which turns negative during the event period.

Table 3. AAR and CAAR for Right Issue Announcements.

Day	AAR	T-statistics of AAR	CAAR	T-statistics of CAAR
-10	-0.0036	-0.1786	0.0316	1.5835
-9	-0.0031	-0.1640	0.0285	1.4968
-8	-0.0040	-0.2206	0.0245	1.3572
-7	0.0050	0.2942	0.0295	1.7338
-6	0.0027	0.1676	0.0322	*2.0211
-5	0.0041	0.2769	0.0363	*2.4599
-4	0.0005	0.0394	0.0368	*2.7341
-3	-0.0063	-0.5220	0.0305	*2.5348
-2	-0.0034	-0.3306	0.0271	*2.5963
-1	0.0024	0.2805	0.0295	*3.4603
0	-0.0153	*-2.5417	0.0142	*2.3519
1	-0.0312	*-3.6682	-0.0171	*-2.0052
2	-0.0037	-0.3501	-0.0207	*-1.9874
3	-0.0037	-0.3077	-0.0244	*-2.0288
4	0.0036	0.2662	-0.0208	-1.5484
5	-0.0022	-0.1473	-0.0230	-1.5608
6	-0.0014	-0.0880	-0.0244	-1.5331
7	-0.0053	-0.3113	-0.0297	-1.7454
8	0.0013	0.0721	-0.0284	-1.5735
9	0.0007	0.0368	-0.0277	-1.4559
10	0.0003	0.0140	-0.0274	-1.3742

(Note 1: \* Statistically Significant at a 5% significance level).

Table 4. CAAR and t-stat for event window periods - Right Issue Announcements.

Event window	(-40,-1)	(-30,-1)	(-10,-1)	(-1,0)	(0,+1)	(-1,+1)	(+1,+10)	(+1,+30)	(+1,+40)
CAAR	0.03	0.03	-0.01	-0.01	-0.05	-0.04	-0.04	-0.06	-1.60
t-stat	0.66	0.81	-0.30	-1.52	*-5.47	*-4.23	*-2.18	*-1.94	*-42.09

(Note 2: \* statistically significant at a 5% significance level).

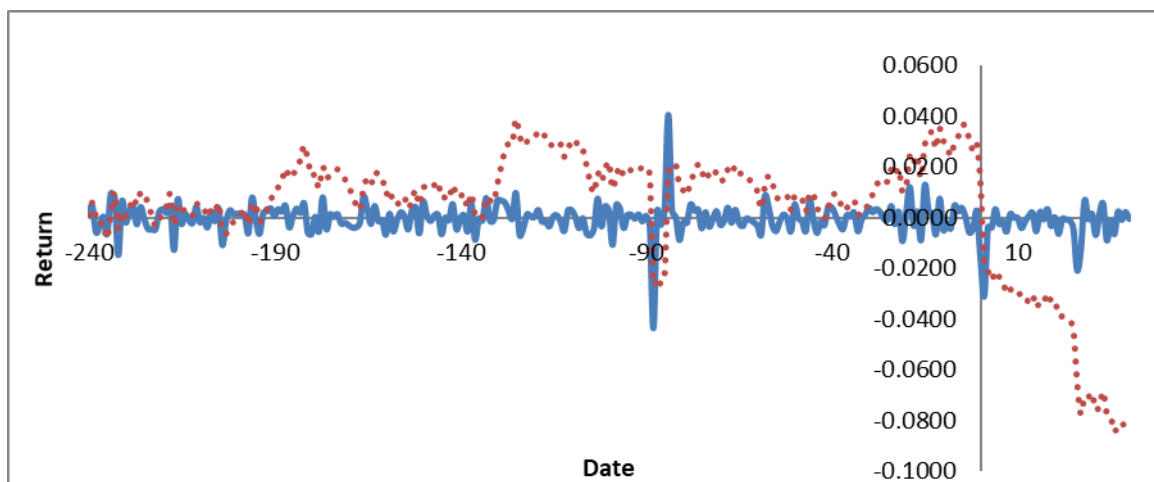
#### **a. Sectoral Analysis – Right issue announcements**

The sectoral analysis of average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) across banking, finance, insurance, hotel, travel, manufacturing, and land and property sectors reveals diverse market responses to right issue announcements.

In the banking, finance, and insurance sector, the AAR ranges from -0.0849% to 0.0843% over the analysis period, with CAAR showcasing an increasing trend between -0.0533% and 0.0618%. Notably, the event day CAAR is 0.0337%, significant at a 5% level, revealing a pre-announcement positive trend turning negative post-announcement. The hotel and travel sector demonstrates fluctuating AAR throughout the window period, ranging between -0.0520% and 0.0353%. Upward trending pre-event CAAR shifts to a rising trend until the announcement day, peaking at 0.1152% on day -14. The event day AAR, -0.0296%, is significant at the 5% level. The analysis confirms the sector's favorable response to right issue announcements, with CAAR being positive from -40 to -5 days, then turning negative.

The manufacturing sector reveals AAR values of 0.0721% and -0.0543%, respectively, which are not statistically significant. Despite an initially negative CAAR trend, there is a marked negative slope at day 4, with subsequent days recording only negative values. Noteworthy is the event day AAR, demonstrating a negative market response. This sector's stock prices experience a downturn before the event day, with a 0.0282% high return during the event period, but this is statistically insignificant. The land and property sector, with five right issue announcements from 2012 to 2019, shows both positive and negative AAR values across the studied period, with extreme values being -0.3166% and 0.0406%, respectively. After day -4, CAAR becomes consistently negative. The sector shows a greater number of negative responses in both pre- and post-event periods, with significant findings at the 5% level. However, event period returns of 0.0395% high and 0.0396% low are not statistically significant.

Figures 4 to 7 represent the aforementioned sectors, displaying a similar AAR trend fluctuating across the window period. Each sector exhibits a negative CAAR trend, initially high at the start of the window but turning positive with time. Except for the land and property sector, all sectors' CAAR shows a drop before the event date, while the land and property sector sees a decline post-event.



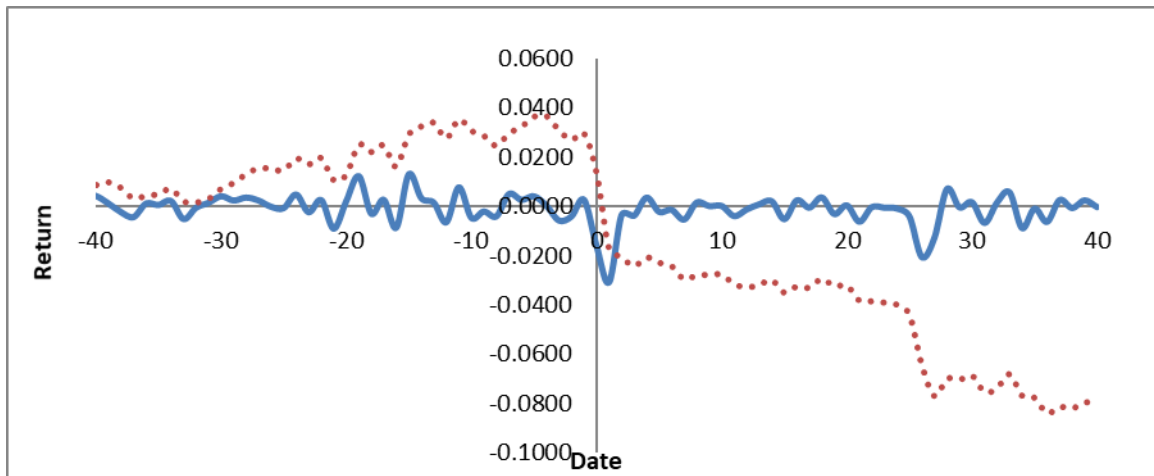


Figure 2: AAR and CAAR for Event Window Period - Right Issue Announcements. *(The dotted line represents the Cumulative Average Abnormal Return and the other line denotes the Average Abnormal Return)*

Figure 3: AAR and CAAR for the Analysis Period - Right Issue Announcements. *(The dotted line represents the Cumulative Average Abnormal Return and the other line denotes the Average Abnormal Return)*

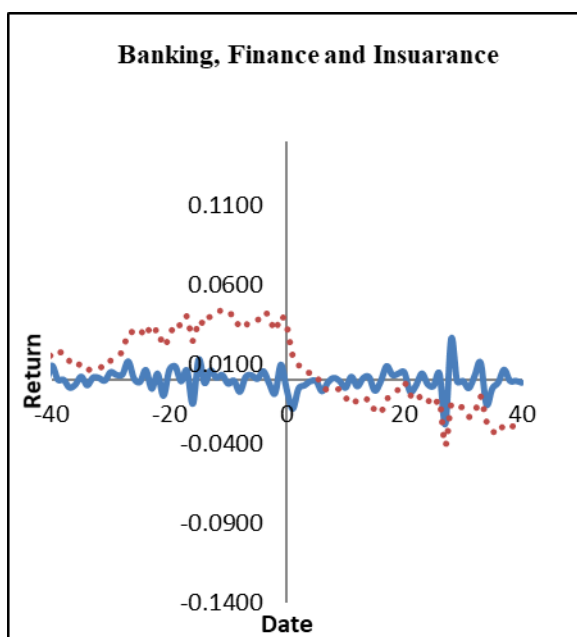


Figure 4: AAR and CAAR for Event Window Period - Banking Finance and Insurance Sector - Right Issue Announcements. (The dotted line represents the Cumulative Average Abnormal Return and the other line denotes the Average Abnormal Return)

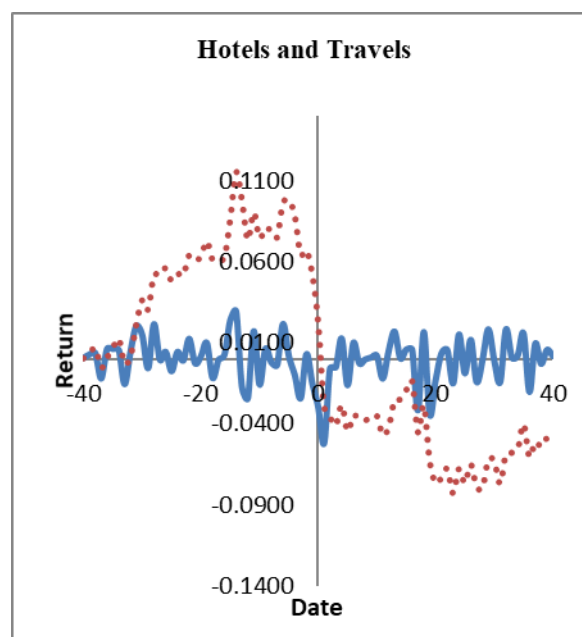


Figure 5: AAR and CAAR for Event Window Period - Hotels and Travels Sector - Right Issue Announcements. (The dotted line represents the Cumulative Average Abnormal Return and the other line denotes the Average Abnormal Return)

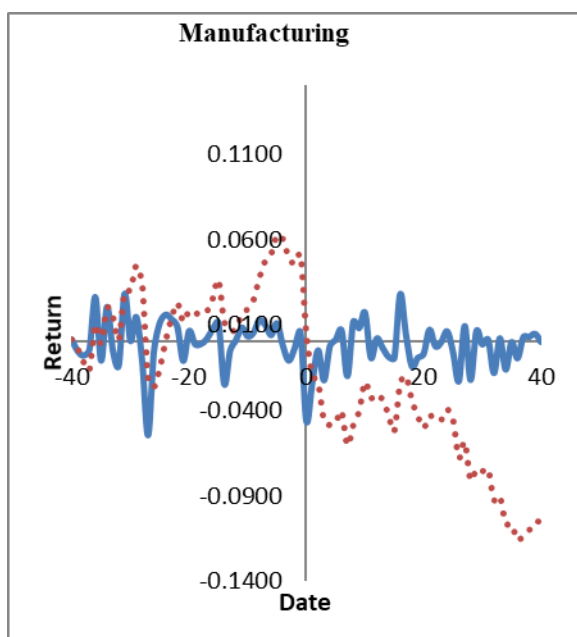


Figure 6: AAR and CAAR for Event Window Period - Manufacturing Sector - Right Issue Announcements. (The dotted line represents the Cumulative Average Abnormal Return and the other line denotes the Average Abnormal Return)

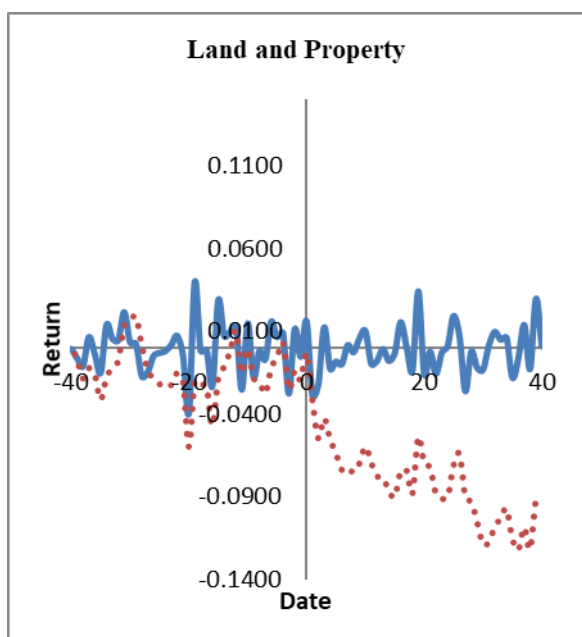


Figure 7: AAR and CAAR for Event Window Period - Land and Property Sector - Right Issue Announcements. (The dotted line represents the Cumulative Average Abnormal Return and the other line denotes the Average Abnormal Return)

## **b. Debenture Issue Announcements**

This study examines 106 debenture issue announcements from 45 companies, focusing on a 21-day event window—10 days pre-event, the event day, and 10 days post-event—as shown in Table 5. The assessment includes both average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) near the event day, which exhibit both positive and negative anomalies. On the event day (day 0), the AAR is a negligible 0.0011%, while the day before records a higher value of 0.0034%, indicating positive AAR. However, these favorable results lack statistical significance. Over the 281-day sample period, the AAR extends from a high of 0.0077% to a low of -0.0046%. Concurrently, pre- and post-event days observe CAAR values of 0.0005% and -0.0538% respectively, symbolizing the high positive and low negative returns.

Throughout the event window—defined as the event day and the following 40 days—CAAR exhibits a declining trend. Nonetheless, Figures 8 and 9 depict a positive AAR on the event day. Within the event window, the highest and lowest AAR values are 0.0077% and -0.0038%, respectively, which lack statistical significance at the 5% level. In contrast, the peak positive and negative CAAR values of -0.0361% and -0.0538% are statistically significant. Table 6 represents the CAAR of debenture issue announcements calculated from the market model. The window periods of (-40, -1) and (+1, +10) yield negative CAAR, whereas other window periods produce positive returns. However, no CAAR values demonstrate statistical significance at the 5% level.

The study further explores industry-specific impact of debenture issue announcements on stock prices, emphasizing sectors with a higher frequency of these announcements. The focus is on the banking, finance, insurance, trading, food, beverage, tobacco, and diversified sectors. The independent evaluation within these sectors aims to understand the association between stock prices and debenture issue announcements.

Table 5. AAR and CAAR for Window Period - Debenture Issue Announcements.

<b>Days</b>	<b>AAR</b>	<b>T-statistics of AAR</b>	<b>CAAR</b>	<b>T-statistics of CAAR</b>
-10	0.0017	0.2793	-0.0436	*-7.3423
-9	0.0012	0.2183	-0.0423	*-7.4824
-8	-0.0003	-0.0603	-0.0426	*-7.9474
-7	-0.0029	-0.5650	-0.0455	*-8.9946
-6	-0.0008	-0.1612	-0.0463	*-9.7768
-5	0.0023	0.5155	-0.0440	*-10.0446

-4	-0.0015	-0.3812	-0.0455	*-11.3845
-3	-0.0014	-0.4009	-0.0470	*-13.1291
-2	-0.0012	-0.4028	-0.0482	*-15.5630
-1	0.0034	1.3625	-0.0448	*-17.6983
0	0.0011	0.5947	-0.0437	*-24.4344
1	-0.0010	-0.4001	-0.0447	*-17.6779
2	-0.0007	-0.2106	-0.0454	*-14.6445
3	-0.0018	-0.4920	-0.0471	*-13.1745
4	0.0000	0.0036	-0.0471	*-11.7800
5	-0.0012	-0.2780	-0.0483	*-11.0316
6	0.0014	0.3022	-0.0469	*-9.9110
7	-0.0013	-0.2553	-0.0482	*-9.5262
8	-0.0015	-0.2731	-0.0497	*-9.2545
9	-0.0006	-0.1137	-0.0503	*-8.8933
10	-0.0002	-0.0411	-0.0505	*-8.5206

(Note 3: \* Statistically Significant at a 5% Significance Level).

Table 6. CAAR and t-stat for Event Window Periods - Debenture Issue Announcements.

Event window	(-40,-1)	(-30,-1)	(-10,-1)	(-1,0)	(0,+1)	(-1,+1)	(+1,+10)	(+1,+30)	(+1,+40)
CAAR	-0.01	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00
t-stat	-0.50	-0.01	0.04	0.40	0.09	0.00	-0.60	-0.05	0.24

(Note 4: \* Statistically Significant at a 5% Significance Level).

### c. Sectoral Analysis – Debenture issue announcements

The study provides sector-specific analysis on debenture issue announcements, focusing on Banking, Finance and Insurance; Diversified; Trading; and Food, Beverage, and Tobacco sectors. The analysis reveals distinct patterns and trends in each sector. The Banking, Finance, and Insurance sector's AAR oscillates between 0.0106% and -0.0049% with insignificant statistical evidence. Majority of its CAAR remain negative throughout the event window, suggesting a negative CAAR slope. On the announcement day, CAAR is notably negative at -0.0549%, reaching significance.

In the Diversified sector, CAAR trends negatively, though the sector observes more positive than negative CAAR values. The highest positive CAAR throughout the study is 0.0492%, significant and indicative of positive AAR in this industry. Notably, day 1 returns are significantly positive at 0.0200%. This sector differs from the overall sample, predominantly exhibiting positive CAAR. The Trading sector displays erratic AAR values, reaching as high as 0.0332% and as low as -0.0268% around the window period. The CAAR trend is predominantly negative, with the largest



CAAR being an insignificant 0.0419%. Anomalous returns are positive 51.86% of the time, suggesting potential profitability leading up to the event day. However, day 0 experiences a negative market reaction. The Food, Beverage, and Tobacco sector, with four debenture issue announcements, presents a mix of positive and negative values. Despite the highest positive AAR of 0.0482% and lowest negative AAR of -0.0364% during the window period, the results lack statistical significance. The CAAR slope is initially upward trending, but turns downward. Notably, the sector yields significant CAAR from the fourth debenture announcement day.

In conclusion, all sectors except Diversified show a negative CAAR trend. The analysis reveals more negative than positive values in three sectors, with the Banking, Finance and Insurance sector mirroring this overall pattern. Although individual AARs are statistically insignificant at the event time, the CAARs from the announcement date are significant at the 5% level.

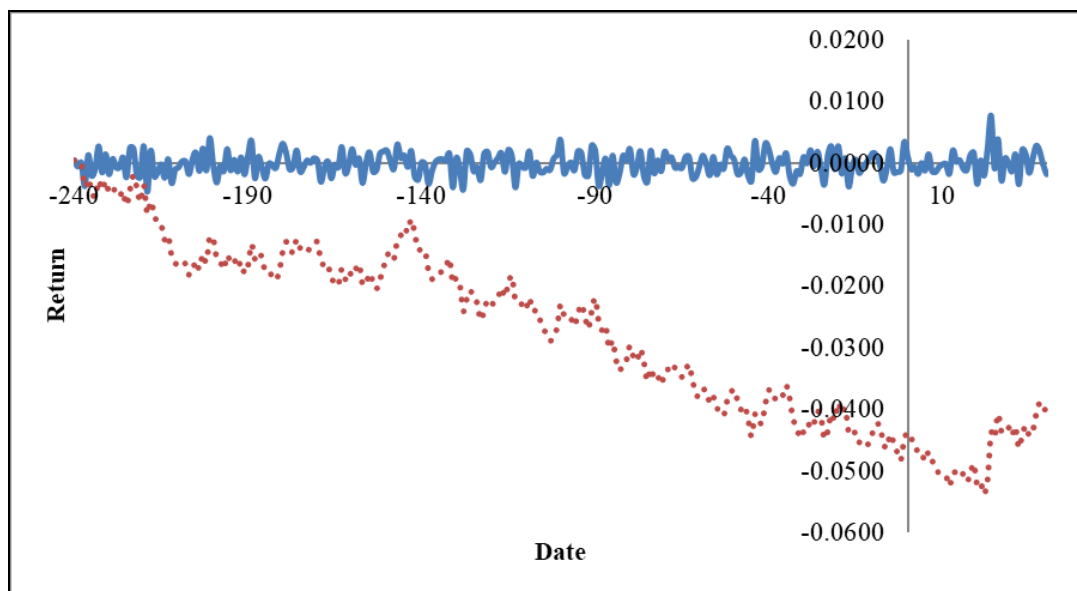


Figure 8: AAR and CAAR for Analysis Period - Debenture Issue Announcements. (The dotted line represents the Cumulative Average Abnormal Return and the other line denotes the Average Abnormal Return)

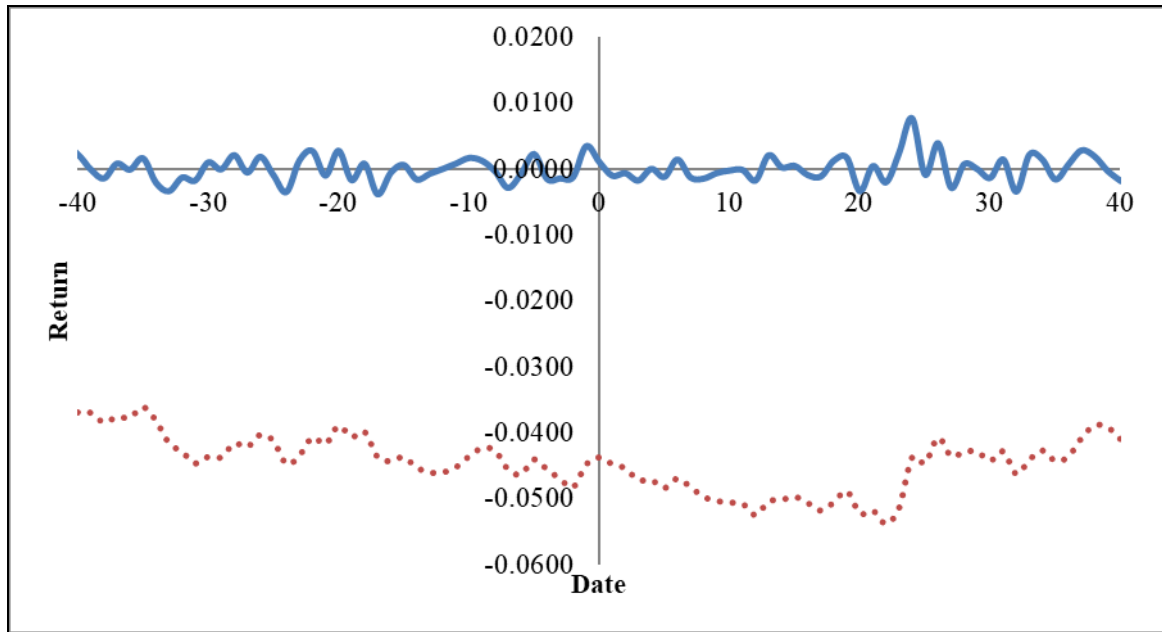


Figure 9. AAR and CAAR for Event Window Period - Debenture Issue Announcements. (*The dotted line represents the Cumulative Average Abnormal Return and the other line denotes the Average Abnormal Return*)

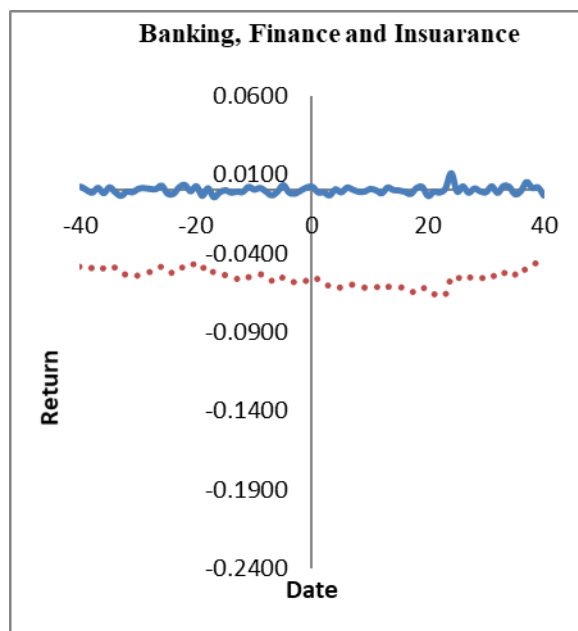


Figure 10: AAR and CAAR fro Event Window Period – Banking, Finance and Insurance sector - Debenture Issue Announcements. (*The dotted line represents the Cumulative Average Abnormal Return and the other line denotes the Average Abnormal Return*)

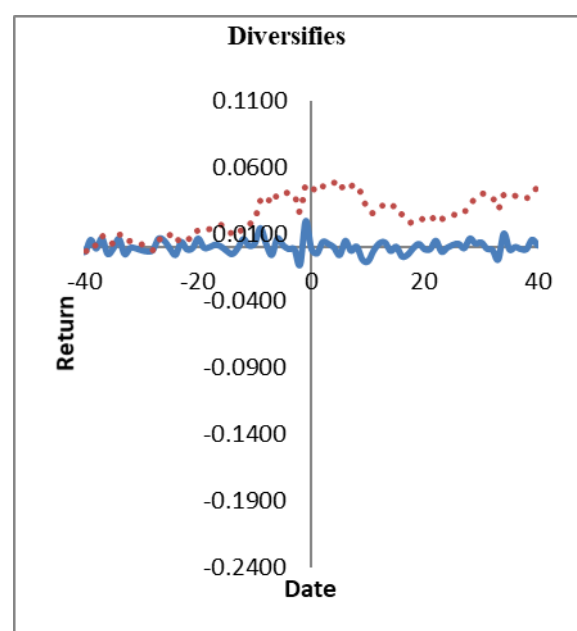


Figure 11: AAR and CAAR for Event Window Period - Diversifies Sector - Debenture Issue Announcements. (*The dotted line represents the Cumulative Average Abnormal Return and the other line denotes the Average Abnormal Return*)

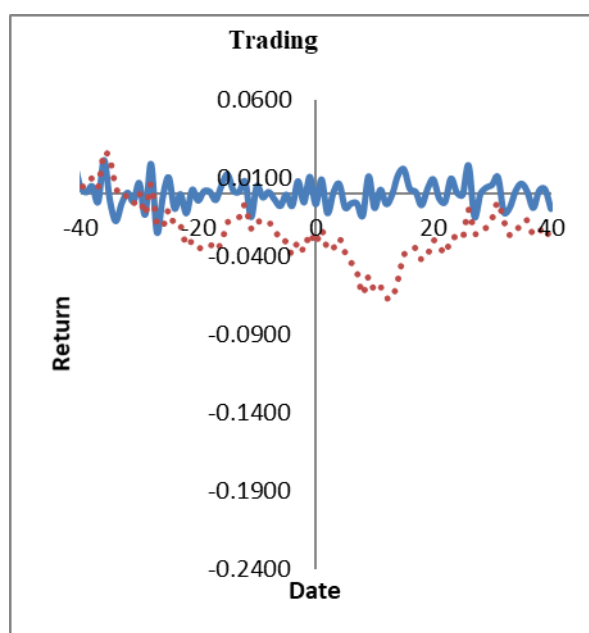


Figure 12: AAR and CAAR for Event Window Period - Trading Sector - Debenture Issue Announcements. (The dotted line represents the Cumulative Average Abnormal Return and the other line denotes the Average Abnormal Return)

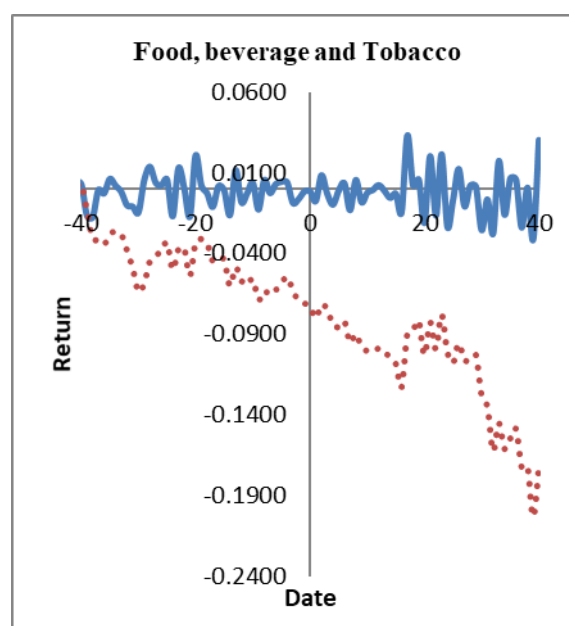


Figure 13: AAR and CAAR for Event Window Period - Food, Beverage and Tobacco Sector - Debenture Issue Announcements. (The dotted line represents the Cumulative Average Abnormal Return and the other line denotes the Average Abnormal Return)

#### d. Discussion

To make it a semi-strong form efficient, the information should be made publicly and widely available to the market. The Colombo Stock Exchange is not a semi-strong efficient market, according to prior studies including CSE-based research like Edirisinghe (2013) and Bandara (1997). The results of the current study's support the conclusion that the CSE is not informationally efficient in its semi-strong version since the consequent values respond significantly only two days after the appropriate issue disclosures.

The current study found the same trend in the case of debenture issue announcements as Bandara (1997) reported. The examination of the data showed that right issue announcements were interpreted negatively, and this information has important implications for investors, issuing companies, management, and regulatory organizations. The current study focused on debenture issue announcements also, and the findings support previous evidence because they are consistent with Edirisinghe's findings (2013). The study shows that debenture issue announcements may be the result of developing-country investors' tendency to be risk-averse and pessimistic; as a result, a business choice to raise the leverage level is seen negatively. In another work on the

"Information Content of Right Issue Announcements, Ramesh and Rajumesh (2014) noted that positive significant average abnormal returns and cumulative average abnormal returns were produced for the right issue announcements on the event day. Their findings supported the notion that, during the evaluated time, the Colombo stock exchange market utilized a variety of emerging market sectors to absorb useful information on the announcement date. They also arrived at the conclusion that the investment decisions' inefficient information dimension responds to public information relatively slowly.

This study's main objective was to analyze the price response to the announcement of a rights issue and debenture issuance in order to determine if the market supports semi strong form of market efficiency. Analysis shows that the right issue announcement generates a positive market reaction throughout the pre-event period. Additionally, as time goes on, up until the day before the announcement, it starts to regularly react negatively following the announcement, with the same negative price response coming before erratic ups and downs in the aftermath.

Declarations of debenture issuances by companies listed on the Colombo Stock Exchange tend to elicit adverse reactions in share prices both pre- and post-issuance, with an incidental positive yet insignificant abnormal return on the announcement day. Despite the manifestation of negative returns during the event window bracketing the announcement, the non-zero cumulative average abnormal returns (CAAR) in the immediate vicinity of the announcement day hold statistical significance.

This observed negative CAR can be attributed to the information asymmetry perceived by investors, as postulated by Myers and Majluf (1984). Upon the firm's announcement of bond issuance, investors infer that managers might be overestimating the firm's worth and thus attempting to unload overvalued securities onto the market, thereby advantaging existing shareholders. This phenomenon is elucidated in Ammann et al. (2006), which portrays managers as strategic players who tend to declare bond issuance when their company's stock prices exceed market averages, thereby exploiting the opportunity presented by overpriced securities. In a bid to safeguard against the risk of securities being overpriced, markets typically respond negatively to a firm's decision to pursue external financing.

Simultaneously, the emergence of negative abnormal returns post-announcement can be comprehended through the lens of Miller and Rock's (1985) pecking order theory. According to this theory, firms tend to hierarchically order their financing sources, prioritizing internal

financing, followed by debt, and ultimately resorting to equity financing when other options are exhausted. The decision to opt for debt financing divulges negative information about the firm's future internal financing, suggesting a decrease in profitability and thus leading to a reduced inclination towards borrowing or a preference for internal over external financing. Consequently, this triggers a transient selling spree of the firm's shares, culminating in negative abnormal returns in proximity to the announcement date. This observation is in alignment with Mikkelsen and Partch's (1986) findings, which recorded significant negative abnormal returns around the announcement date for companies in the USA. Further, it also resonates with the results of other studies such as Cheng et al. (2005) in Japan, and Ammann et al. (2006) in Europe, where each study reported significant negative abnormal returns surrounding the announcement date.

## **5 Conclusion**

Findings of this illustrate the potential of bond issue and rights issue announcements in a frontier market to act as critical market signals for both investors and issuers. This underscores the valuable insight for both academic scholars and market practitioners, that the market has not yet achieved semi-strong form efficiency, as evidenced by the extraction of abnormal (negative/positive) returns from announcements pertaining to rights issues and bond issuances. The relevance and timeliness of these conclusions are indispensable for the managerial echelons of listed companies contemplating corporate bond issuances and rights issues. The findings offer practical, insightful knowledge on the ramifications these actions could have on their share prices. Moreover, this information provides tactical guidance for short-term investors seeking to generate abnormal profits by closely monitoring companies on the brink of issuing bonds or initiating rights issues. Consequently, these results are poised to yield significant benefits to society at large, academics, and market practitioners. By augmenting the understanding of the bond market, it can illuminate the potential for achieving significant abnormal returns through announcements related to corporate bond issuances and rights issues.

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