An empirical study on adjustment of stock prices to information implicit in stock splits: Evidence from Colombo Stock Exchange

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Introduction

Announcements of stock split have been very common phenomena among firms with the implementation of the new Companies Act No. 07 of 2007. Stock splits are only cosmetic transactions that increase the number of shares outstanding while decreasing the share price. There are numerous theories to explain reasons for stock splits by corporations. Among them, most of the empirical studies, especially on developed markets, have been carried on for the optimal trading range hypothesis and signaling hypothesis. However, in case of Sri Lanka, only a few studies are found in literature in relation to this area, of which Gunnathilaka and Kongahawatte, (2011) and Hua and Ramesh (2013) are only the published studies available in the literature. They find that the market reacts positively to stock split announcements and the information implicit on the announcements are accurately and instantly incorporated into stock prices. Accordingly, this study intends to contribute to the existing literature by providing additional insights on information implicit on stock split announcements. Therefore, the objective of this study is to examine the impact of stock split announcement on stock prices and whether the prices are efficiently adjusted to such information on the CSE.

Data and Methodology

The sample period of this study is five years, from 1st January, 2009 to 31st December, 2013. A total of 61 stock splits announcements on the CSE were selected for the sample as shown in Table 1. This study is based on daily data obtained from the Data Library of CSE. The standard event study methodology as discussed in Brown and Warner (1980, 1985), and Campbell, Lo and MacKinlay (1997) is used to evaluate the reaction of stock prices to the announcement of stock splits and for assessing semi-strong form of market efficiency on the CSE. The event window consists of total of 3 days, the day before the event date, the day after the event date and the event day itself. A 41-day investigation window is defined for this study, which extends from day –20 through day +20 relative to the day of the stock split issue announcement (t =0). The estimation window includes 100 days before the investigation window.

Abnormal returns are determined for each sample firm event over the investigation window. The abnormal return is the different between actual return and the expected return. The expected returns are computed using Market Model of which the parameters are estimated in the estimation window and are assumed to be constant over the investigation window. The test statistics proposed by Brown and Warner (1985) are used to assess whether the Average Abnormal Returns (AARs) and the Cumulative Average Abnormal Returns (CAARs) of each day in the investigation window are statistically significant.

Results and Discussion

As shown in Table 2, positive significant AARs are observed on the day of the stock split announcements (t=0) and the day after the announcements (t=1). Consistent with the similar studies conducted by Gunnathilaka and Kongahawatte, (2011) and Hua and Ramesh (2013) on the CSE, these findings reveal that the CSE reacts positively to stock split announcements.

Table 01: The Stock Split Announcements and Selection of Events to the Sample of the Study

Year	No. of stock splits by equity shares	Elimination of Events		No. of stock split announcements selected to the sample
		No. of stock splits by non-voting equity shares	No. of shares infrequently traded	
2009	03	-	-	03
2010	33	02	01	30
2011	27	05	-	22
2012	04	-	-	04
2013	03	01	-	02
Total	70	08	01	61

Based on the sample selection criteria, of the total of 70 stock split announcements during the sample period, 08 announcements are eliminated due to the fact that stock split is made for non-voting ordinary shares, 01 announcement has not been included in the sample due to infrequent trading. There are no multiple announcements together with stock split announcement. Therefore, only 61 number of stock split announcements have been selected to the research sample.

Table 02: Behavior of Average Abnormal Returns (AARs) and Cumulative Average Abnormal Returns (CAARs) on and around Stock Split Announcement Day

Day	AAR		CAAR	
	%	t statistic	%	t statistic
-10	0.277	0.396	3.508	1.592
-9	-0.083	-0.153	3.425	1.488
-8	-0.782	-1.327	2.642	1.103
-7	-0.527	-0.377	2.115	0.851
-6	-0.590	-0.794	1.526	0.593
-5	-0.663	1.636	0.862	0.325
-4	0.055	1.494	0.918	0.335
-3	-0.214	0.220	0.704	0.250
-2	0.562	1.621	1.267	0.437
-1	0.596	0.817	1.862	0.627

0	4.487	5.903**	6.349	2.086*
1	5.460	11.851**	11.809	3.790**
2	-0.805	-1.082	11.004	3.454**
3	-0.472	-0.656	10.532	3.236**
4	-0.608	-1.172	9.925	2.988**
5	-0.455	-1.043	9.469	2.796**
6	-0.960	-2.180*	8.510	2.465**
7	-0.663	-0.664	7.846	2.232*
8	-0.510	-0.785	7.337	2.051*
9	-1.295	-2.620**	6.042	1.661
10	-0.849	-1.031	5.193	1.404

Note: * and ** show significant at 5% and 1% levels respectively.

When the CAARs are considered, they are significant on the day of announcements and over a period of eight days (from t=1 to t=8) after the announcements. This behaviour of CAARs shows that share prices adjust fully to the stock split announcements over a period of, on average, 8 days. Therefore, instantaneous and unbiased share price adjustments to stock split announcements cannot be observed on the CSE over the period of the study. It is important to note that these findings are not consistent with the similar empirical studies of Gunnathilaka and Kongahawatte, (2011) and Hua and Ramesh (2013) on the CSE.

Conclusion

This study attempts to examine whether the stock split announcements impact positively on stock prices and the CSE is efficient in its semi-strong form sense in relation to these announcements over the period from 2009 to 2013 employing the standard event study methodology. The findings of the study reveal that the CSE positively react to the stock split announcements. However, inconsistent with the similar previous studies on the CSE, it is found that stock prices are not accurately and quickly adjusted to the stock split announcement information. Thus, it can be concluded that the CSE is not an efficient stock market in its semi-strong form over the period of the study. An implication of this study is that relevant regulatory authorities have to intervene the market to make sure that trading is taken place at fair market prices. Further, the findings of this study provide incentive for creating innovative financial products which improve investors' active market participations, thereby making the market moving towards efficiency in the long-run.

References

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Source : Data Library of CSE