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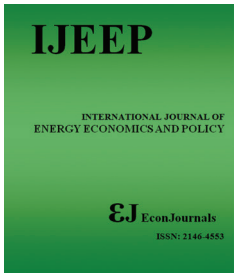

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Market Reactions on Corporate Actions in Growing and Non-growing Energy Consuming Companies

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ABSTRACT

This paper aims to analyze the market reactions on corporate actions in the form of split-up, reverse split, right issue, and mergers and acquisitions in growing and non-growing energy consuming companies in Indonesia. The market reaction is analyzed based on stock price, trading volume, and abnormal returns movements using paired sample t-tests from the results of the event study for 5 days before and after corporate actions in the form of split-up, reverse split, right issue, and mergers and acquisitions. The results showed that stock prices reacted positively on the split-up in growing energy consuming companies, while in non-growing energy consuming companies, stock prices did not react significantly. However, the abnormal returns of growing and non-growing energy consuming companies both showed a negative movement, while the trading volumes did not react significantly. This paper specifically analyzes the market reaction on corporate actions in growing and non-growing energy consuming companies to provide interesting insights about the different reactions given by the market to corporate actions carried out by the companies with different growth categories.

Keywords: Market Reaction, Corporate Action, Split-up, Reverse Split, Right Issue, Merger and Acquisition
JEL Classifications: D81, P48, Q35, Q42

1. INTRODUCTION

The companies along with its industrial chain are one of the most energy consuming in Indonesia. While their operation is largely based on the availability of energy, its position in Stock Exchange is also dependent on its performance, and is sometimes accentuated by its operation such as energy efficiency and oil prices as some indicator of its price in Stoc Exchange. An increase in the price of oil, for instance, will increase the price of industrial products, and in turn, can reduce demand. On the stock exchange, this relationship can affect the company's stock price. Indonesia stock exchange (IDX) has continued to show rapid development over the past 10 years. By the end of 2018, the market capitalization value of the stock exchange had reached IDR. 0,024 trillion with 619 listed companies (IDX, 2018). This showed that during the last 10 years, the market capitalization value and the number of issuers on the IDX have grown by 552.18% and 56.31%, respectively, from IDR. 1,077 trillion and 396 issuers in 2008 (IDX, 2008). This rapid development occurred due to the high increase in investor and issuer participation from year to year. Investor participation in the capital market itself is triggered by the high return offered by investments facilitated in the market compared to various other forms of investment. In IDX, there were 308 corporate action events in the form of split-ups, reverse splits, right issues, and mergers and acquisitions that occurred during the last 5 years with the details in Table 1.

Based on the Table 1, the split-up rate on the IDX continued to fluctuate throughout the 2014-2018 period with an average upward trend of 50.69%, where at the end of the period, number of the split-up events was proven to have increased by 140% from the number at the beginning of the period. Although these findings indicate the possibility of the existence of market reaction to the split-up, split-up itself is considered as an act of a company that has no economic value (Van Horne and Wachowicz, 2012). However, El Ansary and Hussien (2017) found a significant difference in

Table 1: Number of corporate action in IDX (2014-2018)

Year	Corporate action				
	Split-Up	Reverse Split	Right Issue	Merger and Acquisition	Total
2014	5	2	20	23	50
2015	14	2	20	11	47
2016	25	0	33	11	69
2017	23	2	34	17	76
2018	12	3	29	22	66
Total	79	9	136	84	308

(Source: The Indonesian Central Securities Depository, 2019; Business Competition Supervisory Commission of Indonesia, 2019)

abnormal returns before and after the stock split announcement. Rohit et al. (2016) found that the market did not react significantly to the stock split announcement on the bombay stock exchange because the abnormal return found around the announcement was not significant.

Another type of stock split that investors and issuers need to pay attention to is a reverse split. During the 2014-2018 period, there were nine reverse split events on the IDX with an increase of 50% at the end of the period as presented in Table 1. However, reverse split is often associated with the negative abnormal returns because they are considered signaling the company's pessimism about prospects, especially the prospect of an increase in share prices triggered by an increase in profits (Patel, 2016). However, Masse et al. (1997) found a positive abnormal return instead in the Canadian market before and after the reverse split. Gamlemoen and Bornstedt (2016) found that a reverse split can increase stock liquidity significantly. Table 1 showed that the corporate action that can be classified as the most common form among the four forms of corporate action in the IDX during the 2014-2018 period is right issue. At the end of the period, the number of right issue events was also proven to have increased by 45%. This number can also be an initial indication of the positive impact of these actions for the companies which is possibly shown by the positive market reactions. Bello (2016) showed a positive and significant cumulative abnormal return (CAR) on the equity issue announcement day which also include secondary equity offerings conducted through a rights issue. However, Rohit et al. (2016) did not find any significant impact from the rights issue announcement.

Market reaction to the corporate actions itself is often also determined by the various relevant factors. In this case, Karim et al. (2018) found a significant correlation between abnormal returns and the growth opportunity level in the pre-split year. Stocks from companies with higher growth opportunities tend to produce higher abnormal returns around stock split announcements. In contrast, Sartika et al. (2016) found that growth opportunity cannot significantly influence CAR around the corporate action events in the form of right issues. This showed that the market did not taken growth opportunity into consideration when making investment decisions around the corporate action events which in this case conducted in the form of right issues. The gap between the results of various previous studies on the relationship between growth opportunity and market reaction to corporate action of energy consuming reflects the need for actual research to analyze the problem. Therefore, this study specifically analyzes the market reaction on corporate actions in growing and non-growing energy consuming companies to provide interesting insights about the different reactions given by the market to corporate actions of energy consuming companies carried out by the companies with different growth categories.

2. LITERATURE REVIEW

According to the signaling theory, a policy is carried out by issuers to signal a future trend to the market. As a form of corporate action, split-up is considered to signal the company's good prospects to the public because the shares of the company that conducts split-up usually have high prices that reflect its good performances and prospects. Besides, Copeland (1979) argued that the execution of stock split needs a large amount of cost, therefore only good prospective companies can afford it. Both of these reasons will encourage the market to assume the split-up as a form of positive signal. As a result, the market will be driven to react positively to the event. Melati and Nurwulandari (2017) found that split-up can cause a significant effect relative market prices of the stock, particularly in growing companies.

The increase in stock demand due to the lower nominal value after the split-up can also reflect an increase in stock liquidity because the increase in demand will usually be followed by an increase in the number of shares traded. Copeland (1979) argues that stock split itself is carried out by companies to direct stock prices to a certain interval level (optimal range) which in the case of split-up is attempted to a level that is not too expensive so that it can be reached by a wider market. Based on this, split-up will make stocks able to be reached better by small investors because the price will change to be in a not-so-high level, so eventually it will increase the liquidity of the stocks. Hu et al. (2018) showed that stock split can influence stock liquidity positively.

In the case of a reverse split, the corporate action does not always signal the company's pessimism and lack of confidence on its prospects and future performances, but it can also signal the company's efforts to expand its investor base by attracting more institutional investors and financial analysts as one of the stages in a process of delivering the long-term shareholder value (Chung and Yang, 2015; Marwan, 2020). Therefore, investors that can understand the positive signal from a reverse split will be motivated to give a positive reaction. In this case, Masse et al. (1997) found the existence of a positive abnormal return in the Canadian market before and after the reverse split. In the market with a constant assumed return, these findings can also indirectly reflect an increase in relative stock prices after reverse split.

Terrence and Webb (2008) argued that the reverse split is carried out by a company to improve its marketability of shares through the optimal price range. In this case, a reverse split will put stock prices in a better range and improve the image of the company itself by removing the junk company label as stated by Radcliffe and Gillespie (1979) which arises due to the image of penny stock attached to it. Improvement of the image will make the relevant stock more marketable because it triggers more investor interest, especially institutional investors who initially tend to avoid these

shares because the image of penny stock which according to Chung and Yang (2015) makes it considered more speculative and vulnerable to fraud schemes, as well as high risk of the loss of value of the entire investment. As a result, stock liquidity after the reverse split will increase. Gamlemoen and Bornstedt (2016) which showed that the reverse split can increase stock liquidity significantly.

H_1: There is a significant effect stock prices after the split-up in growing energy consuming companies companies.

H_2: There is a significant effect trading volume after the split-up and after the reverse split in growing energy consuming companies companies.

H_3: There is a significant effect abnormal return after the split-up after the reverse split in growing energy consuming companies companies.

H_4: There is a significant effect stock prices after the split-up after the reverse split in non-growing energy consuming companies.

H_5: There is a significant effect trading volume after the split-up after the reverse split in non-growing energy consuming companies.

H_6: There is a significant effect abnormal return after the split-up after the reverse split in non-growing energy consuming companies.

Denis (1994) argued that equity issues tend to signal positive information about investment opportunities that will later be realized in various projects that generate a positive net present value for the company. This will build market anticipation for the company's prospects in the future which will ultimately encourage the market to react positively to the equity issue policy, including the equity issue policy in the form of right issue. Miglani (2011) shows a positive and significant CAR around the announcement of the market reaction to the rights issue. In markets where returns are assumed to be constant in a period, the finding can also indirectly reflect an increase in stock prices around the rights issue announcement. Besides, a positive and significant CAR around the announcement of the rights issues will also trigger an increase in market demand for the relevant stock which will usually be followed by an increase in the number of shares traded and will eventually lead to an increase in the stock liquidity (Nurwulandari et al., 2019). Ginglinger et al. (2013) found a significant effect stock liquidity after the rights issues. As a form of corporate action, mergers and acquisitions can signal the growth opportunities of a company given that the policy, according to Samaras (2007), will make the company to grow faster and have greater power towards the market in achieving synergy in terms of operations and finance (Gaughan, 2011). Growth opportunities that are signaled through mergers and acquisitions will build market anticipation for the company's prospects in the future which will ultimately encourage the market to react positively to the event (Carper, 1990).

Geekiyanage and Jahfer (2017) in the market reaction to mergers and acquisitions in Colombia found a positive and significant abnormal return on offeror and offeree companies on the mergers and acquisitions announcement day. In markets where returns are assumed to be constant over a period, these findings can also indirectly reflect an increases in share prices in that period. The existence of a positive abnormal return will also trigger an increase in market demand for the stock concerned which will usually be followed by an increase in the number of shares traded and will eventually lead to an increase in stock liquidity. Chung and Lee (2012) found a significant effect share liquidity on the acquirer and target companies around the merger announcements.

H_7: There is a significant effect in stock prices after the rights issues and after the merger and acquisitions in growing companies.

H8: There is a significant effect in trading volume after the rights issues an after the merger and acquisitions in growing companies.

H_9: There is a significant effect in abnormal return after the rights issues and after the merger and acquisitions in growing companies.

H_{10}: There is a significant effect in stock prices after the rights issues and after the merger and acquisitions in non-growing energy consuming companies.

H_{11}: There is a significant effect in trading volume after the rights issues and after the merger and acquisitions in non-growing energy consuming companies.

H_{12}: There is a significant effect abnormal return after the rights issues and after the merger and acquisitions in non-growing energy consuming companies.

3. RESEARCH METHODOLOGY

In this study, market reactions are analyzed based on the stock price, trading volume, and abnormal return movements after the corporate actions in the form of split-ups, reverse splits, rights issue, and mergers and acquisitions. In the case of split-up and reverse split, the intended stock price for the period before the event is the relative stock price, i.e., the daily closing price of the stock in the period before the stock split after being divided by the comparison between the shares nominal value before the stock split with the shares nominal value after the stock split. Meanwhile, the shares trading volume here is calculated using the following formula.

$$TVA_{it} = \frac{\sum Traded\ shares_{it}}{\sum Outstanding\ shares_{it}} \quad (1)$$

The abnormal return was measured using the market adjusted model with the following formula.

$$AR_{it} = R_{it} - R_{mt} \quad (2)$$

Note: AR_{it}=*Abnormal return*; R_{it}=*Stock actual return*; R_{mt}=*Market return.*

The population used in this study are companies listed on the IDX that have carried out corporate actions in the form of split-ups, reverse splits, right issues, or mergers and acquisitions in the 2014-2018 period. Based on these criteria, the study population included 308 companies. By using purposive sampling method, 272 sample companies were obtained with 74 of them doing split-up, seven companies doing reverse split, 125 companies doing rights issues, and the remaining 66 companies doing mergers and acquisitions. The sample is then classified into growing and non-growing energy

consuming companies using the growth opportunity proxy, namely the market value of equity to book value of equity (MVEBVE) ratio with the following formula.

$$\text{MVEBVE} = \frac{\text{Outstranding shares} \times \text{closing price}}{\text{Total equitty}} \quad (3)$$

In this case, companies with MVEBVE >1 are classified as growing companies, while companies with MVEBVE <1 are classified as non-growing energy consuming companies. Table 2 presents a classification of the growth categories of research samples.

This study uses event study techniques with an event window consisting of a period of 5 days before the event and 5 days after the event. The analytical method used in this study is the t-dependent test on paired data using the Symple Hypotheses Test and the Wilcoxon Signed Rank Test with Eviews as a tool.

4. RESULTS

Statistical results of the t-dependent tests on paired data using the symple hypotheses test and the Wilcoxon signed rank test are shown in Table 3.

Table 2: Growth categories classification of research samples

Growth categories	Corporate action				Total
	Split-up	Reverse split	Right issue	Merger and acquisition	
Growing	48	2	74	44	168
Non-growing	26	5	51	22	104
Total	74	7	125	66	272

(Source: IDX, 2019; The Indonesian Central Securities Depository, 2019; Business Competition Supervisory Commission of Indonesia, 2019); Yahoo Finance, 2019)

Regarding the market reaction on split-up in growing company, the test t-test on hypotheses 1showed that there was a significant effect in share prices after the split-up of the growing company. Melati and Nurwulandari (2017), Adisetiawan and Atikah (2018) showed a significant effect in share prices after the split-up in growing companies. Regarding market reaction on split-up in non-growing energy consuming companies, it is also evident that there are no significant differences in stock prices before and after the split-up in non-growing energy consuming companies. Melati and Nurwulandari (2017) find significant stock price differences before and after the split-up in non-growing energy consuming companies.

In the relationship between market reaction on reverse split in growing company, the t-test results did not find any significant differences in stock prices, trading volumes, and abnormal returns before and after the reverse split in growing company. Krantz (2011) considers a reverse split as an accounting maneuver that does not provide real benefits for investors. The statistical output on the effect of market reaction on reverse split in non-growing energy consuming companies also showed that t-test results found the non-existence significant differences in stock prices, trading volumes, and abnormal returns before and after the reverse split in non-growing energy consuming companies just like what happened to the growing companies. Investors who understand this eventually will tend not to react to the reverse split which is indicated by the absence of significant stock prices, trading volumes, and abnormal returns movements around the reverse split. In this context, Neuhauser and Thompson (2014) argued that reverse split is basically intended to avoid delisting, so that companies can stay afloat in the market.

The test revealed that in terms of the effect of market reaction on right issue in growing company, it is empirically proven that that

Table 3: The result of stock price reaction on split-up in growing company

Hypothesis	Pre-event mean	Post-event mean	P-value	Note (direction)
1	IDR.1,522.88	IDR.1,557.49	0.0245	Sign. (+)
2	0.001158	0.001056	0.4367	Insign.
3	0.006022	−0.000699	0.0532	Sign (−)
4	IDR. 441.96	IDR. 470.57	0.2641	Insign.
5	0.000468	0.000916	0.5184	Insign.
6	0.010043	−0.004748	0.0223	Sign. (−)
7	IDR. 462.35	IDR. 312.41	0.4385	Insign.
8	0.000043	0.000109	0.3838	Insign.
9	−0.008429	−0.120084	0.4766	Insign.
10	IDR. 388.01	IDR. 305.82	0.1462	Insign.
11	0.000492	0.018609	0.1728	Insign.
12	−0.001246	−0.035205	0.2429	Insign.
1	IDR. 1,364.11	IDR. 1,411.83	0.1102	Insign.
2	0.001843	0.001066	0.0197	Sign. (-)
3	0.005259	-0.005305	0.0029	Sign. (-)
4	IDR. 363.32	IDR. 374.30	0.4733	Insign.
5	0.011778	0.005268	0.9308	Insign.
6	0.007938	0.001618	0.0980	Sig. (−, $\alpha = 0.1$)
7	IDR. 5,684.95	IDR. 5,656.82	0.2640	Insign.
8	0.002325	0.001586	0.1631	Insign.
9	0.002417	0.000108	0.2889	Insign.
10	IDR. 528.85	IDR. 535.01	0.6435	Insign.
11	0.002770	0.002848	0.3849	Insign.
12	0.001575	0.003096	0.7454	Insign.

there was no significant difference in stock prices before and after the rights issue in growing company. Rohit et al. (2016) did not find any significant impact from the rights issue announcement. Furthermore, in relationshio between market reaction on right issue in non-growing energy consuming companies, the t-test results showed that there were no significant differences in stock prices and trading volumes before and after the rights issue in non-growing energy consuming companies. Aldo and Kurnia (2014) also did not find any significant impact on abnormal returns in the period before and after the rights issue. This results proved that market assesses the right issue conducted by the non-growing energy consuming companies as an overvaluation signal of the company's stock price as stated by Edirisinghe and Nimal (2015) with reference to the information asymmetry theory.

Regarding the effect of market reaction on merger and acquisition in growing company, the t-test showed the non-existence of significant differences in stock prices, trading volumes, and abnormal returns before and after mergers and acquisitions in growing companies. Although merger and acquisition are considered able to help the company to achieve the synergy in terms of operations and finances as stated by Gaughan (2011). Lastly, in the effect of market reaction on merger and acquisition in non-growing energy consuming companies, the t-test results showed that there are no significant differences in stock prices, trading volumes, and abnormal returns before and after mergers and acquisitions in non-growing energy consuming companies. This results is in line with Sylvani and Yunita (2017) that unable to found the significant differences in trading volume and abnormal return before and after the announcement of mergers and acquisitions

5. CONCLUSION

Based on the results of this study, the market reacts differently to different corporate actions undertaken by companies in different growth categories in energy consuming companies. In this case, stock prices reacted positively on the split-up in growing energy consuming companies, while in non-growing energy consuming companies, stock prices did not react significantly. However, the abnormal returns of growing and non-growing energy consuming companies both showed a negative movement, while the trading volumes did not react significantly. The results of this study also showed that trading volumes and abnormal returns react negatively to the rights issues by growing companies, while in non-growing energy consuming companies, only abnormal returns that react negatively. As for the reverse split and mergers and acquisitions, the market did not show a significant reaction both in growing and non-growing energy consuming companies.

Based on this conclusion, investors need to be more careful in making investment decisions around corporate actions in energy consuming companies. In this case, investors should not ignore information about the company's growth category because it can ultimately cause misinterpretation about the information signaled by the corporate action itself. As for the company, they should not do split-ups with the aim of increasing liquidity, but to increase the relative price of shares instead. In conducting reverse split and right issue, the company also need to pay attention that most research proves that the two forms of corporate action are actually not able to improve the movement of shares on the stock exchange, they even can affect them negatively instead. The company also needs to remember that mergers and acquisitions will not have a direct impact on market movements in the short-run. As for the non-growing energy consuming companies, they should not carry out the four forms of corporate action above solely just to improve their shares' performance because the low growth opportunity they have eventually will make investors tend to ignore the various positive signals that have been tried to be signaled by them.

REFERENCES

Adisetiawan, R., Atikah, A. (2018), Does stock split influence liquidity and stock return? Empirical evidence in the Indonesian capital market. Asian Economic and Financial Review, 8(5), 682-690.

Aldo, N., Kurnia, R. (2014), Right issue: The impact to abnormal return, share liquidity and company's financial performance. Global Journal of Business and Social Science Review, 2(4), 1-8.

Bello, M.A. (2016), Market reaction and insider trading around the announcements of equity issues: Evidence from Nigeria. International Journal of Accounting Finance and Risk Management, 1(1), 25-32.

Business Competition Supervisory Commission of Indonesia. (2019), Publikasi Pemberitahuan. Available from: https://www.kppu.go.id/id/merger-dan-akuisisi/publikasi-pemberitahuan. [Last accessed on 2019 May 03].

Carper, W.B. (1990), Corporate acquisitions and shareholder wealth: A review and exploratory analysis. Journal of Management, 16, 807-823.

Chung, K.H., Lee, K.Y. (2012), Liquidity and returns to target shareholders in the market for corporate control: Evidence from the US markets. Journal of Business Finance and Accounting, 40, 142-171.

Chung, K.H., Yang, S. (2015), Reverse stock splits, institutional holdings, and share value. Financial Management, 44(1), 177-216.

Copeland, T.E. (1979), Liquidity changes following stock splits. The Journal of Finance, 34(1), 115-141.

Denis, D.J. (1994), Investment opportunities and the market reaction to equity offerings. Journal of Financial and Quantitative Analysis, 24(2), 159-177.

Edirisinghe, U.C., Nimal, P.D. (2015), Stock price reaction to announcements of right issues and debenture issues: Evidence from colombo stock exchange. International Journal of Business and Social Research, 5(2), 67-76.

El Ansary, O., Hussien, M. (2017), The impact of stock dividends and stock splits on shares prices: Evidence from Egypt. Accounting and Finance Research, 6(4), 96-114.

Gamlemoen, J.O.S., Bornstedt, K. (2016), The Effects of Reverse Stock Splits: Of the Oslo Stock Exchange 1996-2015, Master Thesis, Business School of Oslo and Akershus University College, Oslo.

Gaughan, P.A. (2011), Mergers, Acquisitions, and Corporate Restructurings. 5th ed. New Jersey: John Wiley & Sons.

Geekiyanage, G., Jahfer, A. (2017), Stock price reaction to merger and acquisition announcement: Evidence from Colombo stock market. In: Proceedings of 7th International Symposium, 7-8 December, South Eastern University of Sri Lanka, Oluvil. p19-28.

Ginglinger, E., Koenig-Matsoukis, L., Riva, F. (2013), Seasoned equity offerings: Stock market liquidity and the rights offer paradox. Journal of Business Finance and Accounting, 40(1-2), 215-238.

Hu, M., Jain, A., Zheng, X. (2018), Stock splits and liquidity risk in the Chinese stock market. In: 9th Conference on Financial Markets and Corporate Governance, 5-7 April, the La Trobe Business School,

Melbourne.
Indonesia Stock Exchange (IDX). (2008), IDX Fact Book 2008. Jakarta: Research and Development Division.
Indonesia Stock Exchange (IDX). (2018), IDX Fact Book 2018. Jakarta: Research and Development Division.
Indonesia Stock Exchange (IDX). (2019), Financial Statements and Annual Reports. Available from: https://www.idx.co.id/en-us/listed-companies/financial-statements-annual-report. [Last accessed on 2019 Jun 12].
Karim, M.A., Rathinasamy, R., Zaidi, S.K. (2018), Market reaction to split announcements: Rational response or behavioural bias? Academy of Accounting and Financial Studies Journal, 22(2), 1-15.
Krantz, M. (2011), What does Citigroup's Reverse Stock Split Mean for Investors? USA Today. Available from: http://www.usatoday.com/money/perfi/columnist/krantz/2011-05-12-citigroup-reverse-stock-split_n.html. [Last accessed on 2019 May 25].
Marwan, M. (2020), The access to government financial support through legal channels of small and medium enterprises in four asia pacific countries. Jurnal Hukum dan Peradilan, 9(2), 298-313.
Masse, I., Hanrahan, J.R., Kushner, J. (1997), The effect of Canadian stock splits, stock dividends, and reverse splits on the value of the firm. Quarterly Journal of Business and Economics, 36(4), 51-62.
Melati, M., Nurwulandari, A. (2017), Analisis reaksi pasar terhadap stock split pada perusahaan bertumbuh dan tidak bertumbuh. Oikonomia: Jurnal Manajemen, 13(2), 1-25.
Miglani, P. (2011), An empirical analysis of impact of right issues on shareholders returns of Indian listed companies. Research World: Journal of Arts, Science and Commerce, 2(4), 169-176.
Neuhauser, K.L., Thompson, T.H. (2014), An examination of the survavibility of reverse stock split. International Journal of Managerial Finance, 10(3), 293-311.
Nurwulandari, A., Adnyana, I.M., Hasanudin, H. (2019), Did inter-regional trade agreements bring mutual benefits? An empirical scheme of Indonesian commodity exports in ASEAN-China free trade area. International Journal of Financial Research, 10(6), 241-249.
Patel, M., Dave, M., Shah, M. (2016), Stock price and liquidity effect of stock split: Evidence from Indian stock market. International Journal of Management Research and Review, 6(8), 1030-1039.
Radcliffe, R.C., Gillespie, W. (1979), The price impact of reverse splits. Financial Analyst Journal, 35(1), 63-67.
Rohit, B., Pinto, P., Shakila, B. (2016), Impact of stock splits and rights isssue announcement on market price: Evidence from India. Drishtikon: A Management Journal, 7(2), 1-16.
Samaras, V. (2007), Internal Versus External Growth: Impact on Operational and Market Performance, Working Paper.
Sartika, F., Djumahir, D., Sumiati, S. (2016), The effect of growth opportunities, issue size, leverage, ownership concentration, and subscription price discount toward cumulative abnormal return: Study on right issue event. Global Journal of Business and Social Science Review, 4(3), 98-107.
Sylvani, N.F., Yunita, I. (2017), Market reactions toward mergers and acquisitions announcement in telecommunication firms listed in Asia-Pasific stock markets. International Journal of Management and Applied Science, 3(5), 14-18.
Terrence, F.M., Webb, G.P. (2008), The performance of stocks that are reverse split. Review of Quantitative Finance and Accounting, 30(3), 253.
The Indonesian Central Securities Depository. (2019), Data dan User Guide. Available from: https://www.ksei.co.id/data/download-data-and-user-guide?setlocale=en-us. [Last accessed on 2019 May 03].
van Horne, J.C., Wachowicz, J.M. (2012), Fundamentals of Financial Management. 12th ed. New Jersey: Prentice Hall.
Yahoo Finance. (2019), Historical Data. Available from: https://www.finance.yahoo.com. [Last accessed on 2019 May 14].