Investor Responses Towards Corporate Action
(An Evidence from the Healthcare Sector)

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ABSTRACT
This research aims to analyze the investor responses to corporate action in the form of Mergers and Acquisitions (M&A) in the Healthcare sector in Southeast Asia. The sample data of this study is 80 companies from the Healthcare sector in South East Asia (ASEAN) and is listed on the stock exchanges of each regional country in 2017-2020. The measurement of the investor’s responses use CAR in eleven, five and three days event window. The main finding of this research is that investors respond positively in the short term period.

Keywords: Corporate action, Investor responses, Healthcare, Merger and acquisition.

1. INTRODUCTION

Before making an investment decision, investors use some information from many sources to choose the right one [68]. The information that used are financial performance and business prospects. Based on a study from Mohamed [47], financial performance is one of the most important information for investors. To find out more about the firm’s financial performance, investors use financial statements as a source of information. Previous study [19]; [32]; [33] proves that investors need a fair and reliable financial statement to make a rational decision. Financial statements can also describe the actual situation in the company whether its reputation is good or bad. But in some cases, financial statements can also be manipulated by managers to hide the firm’s bad news [37] and investors could be at a disadvantage [6]. Therefore, financial statements are not enough to be considered as useful information for long term decisions especially in estimating the future performance [13].

Previous research on financial performance responded by investors was not completely solid because a study from Orens [49] shows that there is a decrease in the investor’s interest toward financial information. Nowadays, investors tend to find out more about a firm's business prospects for analyzing a firm's potential in the future [42]; [69]. Louis [42] proves that corporate action such as Merger and Acquisition (M&A) can attract great attention from investors. Morresi [48] also says that M&A is considered as a fast way to external growth and realizing company goals without creating a new business. Research about M&As has been done for a long time and continues to grow until now. In this 21st century, companies that use M&A as a strategic business increase rapidly [10]; [18] because M&A is a good strategy for business sustainability, business performance and business development in the future [24]; [30]; [40]. Prior studies [23]; [52]; [56] found that investors responded positively to M&A. If there is a positive response from investors, then there is optimism from the investors about the future of the company. Alexandrou [4] also proves that there are positive responses from the investors toward M&A especially in the pharmaceutical sector. For example, when Hancom Inc. acquired SanCheong Co in 2017. After the announcement of M&A, there is an increase in the stock price. However, the result from another study contradict with several studies [1]; [18]; [41]; [51]. Dilshad [18] proves that investor responses to M&A is not significant and only for short term effect. Rahman [51] proves that most investors did not respond to M&A and there is a decrease in the firm’s stock price. In addition, some professionals think that M&A are not something that attracts public attention [42]. Srivastava [67] argues that investors show a negative response immediately and the stock price decreased temporarily after M&A.

The study of M&A has been done in many sectors such as lodging [35], banking [15], airlines [73] and many more. In fact, these studies have a different result because each sector has its own characteristics [14].
Research that is conducted in one sector is better than multi sector because it can help investors to obtain the best result [64]. We choose the health care sector for this research. Because of the pandemic COVID-19 in early 2020, the healthcare sector is currently growing very rapidly and is expected to experience exponential growth in line with population growth and health awareness during the pandemic [20]. In fact, many people were more concerned about their health now [64]. There is also news about the Covid-19 vaccine [34], which has been distributed to the public now, can influence investors to their investment decisions. M&A is important to increase profits, considering increasingly competitive competition, increasing needs, and the need for high research and development [46]. Hassan [31] said that factors such as the high cost of bringing drugs to market and lower success rates are also why pharmaceutical companies to carry out M&A activities.

Meglio [44] argues that M&A is a complex and multidimensional research topics so there are still some questions left. Previous studies related to investor responses toward M&A also give different results [43]; [71]. Because of the different results, we found that there is an inconsistency from the previous studies. Rao [53] argue that there are different results from each study because there are differences in the data such as sector, country, period, etc. Because there are differences in research results related to investor responses to M&A and there is still a lack of research on investor responses to corporate action M&A, we conducted this study to analyze investor responses to M&A in the healthcare sector, considering the importance of information on events involving a company for investors. Our study uses a sample of companies in the healthcare sector in South East Asia from 2017-2020 using market capitalization and growth as control variables.

The following discussion in this paper remains as follows: chapter 2 explains the literature review and hypothesis development, chapter 3 explains the data and research methods, chapter 4 explains the results of the analysis of the research and discussion and chapter 5 explains the conclusions and limitations in this research.

2. LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

2.1. Signaling theory

Signal is an action to give some clues to the investors about how managers view the firm's business prospect [16]. Based on the signaling theory from Spence [65]; [66]; investors will react immediately when new information about a company is revealed. Signalling theory suggests that there is a connection between a company’s information and the company's prospects. Signal theory has been carried out in several studies to find out how signal can affect investors decisions [9]; [11]; [16]; [54]; [57]; [61]; [74]. M&A have an informative value for investors that can influence their decision making and is a signal for investors. Previous study about M&A [70] also uses signaling theory as an approach to understand the effect of acquisition deals on investors. Signals are considered an important thing when conducting M&A because it can be used to show potential profits and sustainability of the company in the future [70]. Reuer [55] suggests that if the acquiring company has specific information about the target, it will be a good sign for the company's sustainability and lead to a successful M&A. Overall, signaling theory is used in M&A to show signs or signals given to investors about a corporate actions taken by the company [16].

2.2. Investor Responses

Investor responses is a reaction form investors toward information that is related to the company’s performance and decisions [58]. Investor actions will be shown from the movement of the stock price. The company publishes information such as financial performance every year to see if investors responded positively or not [33]. Study from Rosen [56] proves that there is a momentum when M&A is carried out, and that is the positive responses of investors to the merger. Li [39] said that there is also a positive response from the market post-M&A announcement in the pharmaceutical sector.

Investor responses in this study are measured by CAR (Cumulative Abnormal Return). CAR is the sum of the average abnormal returns during the observation period around the announcement date. Yaghoubi [72] found that both the acquiring company and the target company had a significant between abnormal stock returns before and after the acquisition. Abnormal return is the result of the difference between the actual return and the expected return that occurs after or before the official announcement of the information [72]. Prior studies [31]; [39]; [46] shows that there is a positive abnormal return from M&A. If a company has an abnormal return, then this indicates that investors respond positively to the company's activities. There are several studies that used CAR as a measurement for investor responses [2]; [25]; [28]; [29]; [56]. Study from Ball and Brown [7] found that there is a significant relationship between announcement date and stock price changes. When a company announces there is an increase in earnings, there will be a positive change in the stock price and vice versa, if there is a decrease in earnings, there will be a negative change in the stock price.
2.3. Corporate Action

Corporate action is an action that is carried out by a company and has an impact to the investors or stakeholders. In general, corporate action is defined as any type of event or decision that leads to a significant change in the company. According to Groves [26], corporate action can affect the prices of shares, both outstanding and unissued. Shirur [62] said that corporate action is believed to be good news from the investors, especially in M&A. There are two types of corporate actions, namely corporate actions that affect the number of outstanding shares such as the distribution of stock dividends, stock splits, reverse stock splits, bonus shares, buy backs, rights issues and corporate actions in the form of corporate restructuring such as mergers and acquisitions (M&A), tender offer, and spin off [63]. Corporate action is an important topic of research because the final results of each company are not always the same, especially in M&A actions. M&A can affect the composition of securities ownership after it is done, affect stock prices, and business prospects in the future. Therefore, investors, both shareholders and non-shareholders, must analyze the impact of corporate action in order to prepare the right anticipation in making investment decisions.

M&A is a combination of total assets and liabilities from two or more firms merged into one big company [67]. M&A can be a good strategy for companies that want to grow and expand their market [21]; [22]; [24]. Many companies, especially in developed countries, stated that M&A is an opportunity for company growth [50]. In addition, the M&A activity carried out over the decades due to the differences in interests between managers and shareholders of the acquiring company over free cash flow payments [60]. There are factors that influence M&A such as the financial condition of the target company and the acquiring company. Kumar [38] said that the larger firm is more likely to be the acquirer while the smaller firm is more likely to be the target firm. Although M&A is a risky strategy [59], the announcement of M&A from a firm can affect investor’s responses in making decisions [57].

The measurement of the M&A actions uses a dummy variable [27]. Just as the word “dummy” is a substitute in quantitative analysis models, where the dummy variable is a substitute for numbers for qualitative facts or logical propositions [12]. Research that uses a dummy for M&A has been carried out [8]; [12] because M&A is a variable whose form is non-metric and categorical, so it requires a dummy variable in the regression model.

2.4. Hypothesis Development

According to Alexandridis [3], M&A actions are important to encourage company growth, increase market capability, increase shareholder wealth, and increase profitability. Several previous studies have proven that companies that carry out M&A can attract the attention of investors [23]; [75]. Fu [23] argues that when the market is optimistic, investors will be more enthusiastic about M&A. Investors are one of the important figures because according to Scott [58], investor responses can affect the performance of a company. According to Spence [65]; [66], investors will react immediately when new information about a company is revealed. This is because the information provided by the signaler can be used by investors to evaluate the stock market reaction [18]. If the investor’s response is positive to the information provided by a company, it can prove that the signal given has been received. This argument has been proven from the following studies [23]; [52]; [56]. But companies can hide information about organizational problems or negative news to get positive outputs [37], so investors should be able to know which information is reliable for investment decision making [45]. Several studies [9]; [16]; [45] revealed that companies make the signal given by the company as one of the considerations for investors to assess the company’s future possibilities and make decisions. If the company has good performance and the ability to grow and develop the business, investors will also respond positively. Prior studies from Reuer [54] and Schijven [57] also support this argument. From the understanding and previous findings above, it can be concluded that:

H1: Corporate action has a positive effect on investor response

3. METHOD

3.1. Model of Analysis

This study uses corporate action as independent variable which are measured using dummy variable. The dummy variable for M&A using 0 and 1 whereas 0 for the company that does not conduct M&A and 1 for the company that does M&A.

For dependent variable, we use investor responses which are measured using CAR. We use event window (-5,0,5) with 130 days estimation period. We use the standard market model to calculate abnormal returns at the time of the M&A announcement where i is an event/firm and t is the time the abnormal return occurs [28]:

\[ ARit = Rit - E(Rit) \] (1)

Where :

ARit = Abnormal return from firm (i) on day (t)
Rit = Actual rate of return from firm (i) on day (t)
E(Rit) = Expected return from firm (i) on day (t)
Next, expected return is calculated from the following formula:

\[ E(R_{it}) = R_f + \beta_i x (E(R_{mt}) - R_f) \]  

(2)

Where:

- \( E(R_{it}) \) = Expected return from firm (i) on day (t)
- \( R_f \) = Risk-free rate of return
- \( E(R_{mt}) \) = Expected market return on day (t)
- \( \beta_i \) = Intercept of the firm (j)

Therefore, Cumulative Abnormal Returns (CARs) is the sum of daily abnormal return from firm (i) on day (t).

\[ \text{CARs} = \sum AR_{it} \]  

(3)

This research use control variables such as Market Capitalization and Growth. Market Capitalization is an important variable because it can evaluate the value of a company easily [38]. In addition, this variable can make it easier for investors to determine which companies are good for investment. Market Capitalization is calculated from number of outstanding shares multiplied by the price per shares [38].

The second variable is growth that is measured by Total Assets (TA) of a firm. Study from Kim [36] also used TA to measure growth in the banking sector because TA covers all financial activities of the company. A company is considered good if the growth rate is higher. The formula for this variable using the following model [17]:

\[ G = \frac{TA_t - TA_{t-1}}{TA_{t-1}} \]  

(4)

Where:

- \( G \) = Growth

4.1. Descriptive Statistics and Normality Test

The Table 2 shows n, minimum, maximum, average (Mean), and standard deviation (Std Deviation) from investor responses (CAR) with the other variables, Market Capitalization (MC), and Growth (G). From Figure 2, the average of CAR (-5,0,+5), CAR(-2,0,+2), CAR(-1,0,+1), and G shows lower value than the standard deviation. While the average of MC shows higher value than the standard deviation.

For the normality test, we used the Kolmogorov-Smirnov test to test whether the data is distributed normally or not. In this data normality test that has been
carried out, it shows that the distribution of the data is not normal. Based on the Central Limit Theorem, as the sample size becomes larger, all the samples are considered similar no matter what the shape of the population distribution.

To test the multicollinearity of the data, we only use tolerance and VIF and the result shows there is no multicollinearity in the regression. We use the Glejser test to test the heteroscedasticity in this data and there is no heteroscedasticity problem. Based on the results of the Durbin-Watson autocorrelation test, The value of DW is higher than the dU and dU is less than (4-dU) so it can be concluded that there is no autocorrelation.

### 4.2. Hypothesis Testing

The purpose of this research is to analyze the investor responses to corporate action in the form of Mergers and Acquisitions (M&A) in the Healthcare sector in Southeast Asia. We present the regression result of investor responses during the event window around the announcement of a firm’s financial performance in table 3. As shown below, the period of CAR includes 5 days before the announcement (t-5), the day of the announcement (t0), and 5 days after the announcement (t+5). We also report the results of an event study using the event window (-2, 0, +2) and (-1, 0, +1).

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<th>Table 3. Regression results</th>
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<td><strong>Variable</strong></td>
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### 4.3. Discussion

This study examines how investor responses to a corporate action (M&A). The coefficient of DUMMY in CAR (-5, 0, +5) shows negative value = -0.058. If DUMMY shows a negative value then investors didn’t respond positively toward corporate action in the eleven days event window. We found that there is no significant effect from investors toward M&A in the long term period. Research from Andre [5] also proves that investors did not respond positively toward M&A in the long term period While the coefficient of DUMMY in CAR (-2, 0, +2) = 0.016 and CAR (-1, 0, +1) = 0.001 shows a positive value which means that investors respond positively to an M&A. This proves that the “signals” from the company are responded positively by the investors. Research from Bergh [9] and Connelly [16] also argue that signal can be a good thing to affect the investor’s response. The MC result of this research shows negative value. If the market capitalization has a lower value, a company may go through a period of rapid earnings growth on occasion. Alexandridis [3] also said that if the capitalization rate shows negative value then, a company might have acquired new technology, access to a protected market for a while, or favorable customer contracts. We found that G from CAR (+5, 0, -5) has the highest value even though the corporate actions are responded negatively. This shows that investors respond positively to the asset growth of a company. This can also prove that investors still use financial performance as an indicator to make decisions for the long term period.

### 5. CONCLUSION

This research was conducted using South East Asia (ASEAN) companies in the healthcare sector from 2017-2020. Data sample that we used is 80 companies from Indonesia, Malaysia, Singapore, Thailand, Filipine, and Vietnam. As we have presented the empirical results of our study, we conclude that there is a significant effect from investor responses to corporate action in the five event window and three event window. However, we found that investors respond negatively to corporate action in the eleven event window. This proves that investors only respond to M&A in the short term period. This research is consistent with previous [18]; [41]; [51] that proves the effect of M&A only in a short term period. We also found that there is no significant effect from the market capitalization to corporate action. From the analysis, it can be derived that the M&A did not provide potential benefits to all firms in the healthcare sector because
most of the firms experienced declines in their market value (share price). For the growth of a company, investors might not show a significant response to a business prospect in the long term, but response toward financial performance for a long term prospect.

This research has limitations. We only use data from public companies in South East Asia (ASEAN) from 2017-2020. We found that there are a lot of companies that only publish the annual report from 2018 onward. There are also some companies that have a zero value in the abnormal return. This means that the firm is not active in the stock market. In addition, we score manually for the data which is only based on the subjectivity of the researcher’s considerations. In the future research, we can suggest using a larger data sample like Asia, America, Europe, etc and different measurements to measure the investors response more accurately. Furthermore, research can use different control variables like firm size, leverage, etc. to determine the investor responses to M&A in the healthcare sector.

The results of the study are expected to deepen investors’ knowledge, especially new investors regarding the influence of business prospects on stock prices and stock returns and also investors will be able to know the views of investors on financial statements and business prospects in choosing investments so that investors can consider these factors more in determining decisions related to investing in the health sector. For the company, the study results can help as a decision that will be taken by management to improve company performance such as financial statements, business prospects, etc. so that they are in line with investor expectations.

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