Analysis of Announcement Merger and Acquisition and Payment Method to Stock Return: Study of Listed Companies at Bei During 2005-2011

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Merger and acquisition are important information for shareholders. Merger or acquisition announcement released by a company will affect share price of target company. This research of merger and acquisition with payment method aims to test the effect due to the event. Their reaction depends on early announcement and how a company fund the merger and acquisition. Hypothesis for this research are whether there is positive abnormal return during the announcement date of merger and acquisition, and whether Average abnormal return Merger and acquisition announcements using cash as a method of payment is greater than the announcement Mergers and acquisitions using stock as a method of payment.

The method of research used in this study is a method of verificative and descriptive event study approach. The samples used in this research are companies listed on the Indonesia Stock Exchange that announced their mergers and acquisitions in the year 2005-2011 and acquired 20 companies to 10 companies using cash payments and 10 companies using stock payments. The method of analysis used in this study is event study method, which is to observe the company’s stock price and then calculate the average abnormal return before and after the merger issue. Result shows that there is positive abnormal positive return during the announcement date of merger and acquisition, there is a significant AAR prior to the announcement of mergers and acquisitions. And for the payment method, Average abnormal return on the announcement of the merger and acquisition using cash is not greater than the average abnormal return to the stock as a payment method to undertake mergers and acquisitions.

Keywords: abnormal return, merger, acquisition

Introduction

In today’s era of globalization, companies are required to constantly develop an appropriate strategy in order to survive and thrive, that is maintaining its existence and improving their performance. One way to become a bigger and stronger company is through expansion, both internally and external. One strategy of external expansion that can be done by the company so that it may survive or even thrive is merger and acquisition (M & A).

As long as it is done on the basis for obtaining synergies, then the Mergers and Acquisitions are expected to improve the company’s financial performance, thereby increasing the amount of demand for the company’s stock, which in turn will affect
the rise in stock prices. Higher stock prices will increase value of the firm that will ultimately improve the welfare of the shareholders.

On September 23rd 2008, PT. Indofood Tbk. pursued a Merger with payment in cash when the stock price per share was Rp 2,100.00. Following the announcement of the merger event, PT. Indofood’s stock price declined, in which at D+15 its price turned to Rp 1,410.00 per share. Another fact of the decline in stock prices also occurred to PT. Bumi Resources Tbk. Bumi implemented their Merger on December 30th 2008, using stock as a method of payment and at which their share price was Rp 910.00 per share. After the announcement of the merger, the company's stock price declined, where at D+15 reached to Rp 470.00 per share.

Based on the above problems this author is interested to analyze various announcements of mergers and acquisitions, and the chosen method of payment for stock returns, on all of those performed by companies that merged at the Indonesian Stock Exchange during the 2005-2011 period.

Problem Statement

Based on the background described above, the issues discussed in this research are:

1. Is there a Positive Abnormal Return on the company's shares on the Indonesian Stock Exchange during or around the announcement date of mergers and acquisitions?
2. Is Average Abnormal Return on the announcement of Mergers and acquisitions using cash as a method of payment, greater compared to Average Abnormal Return on the announcement of Mergers and acquisitions using stock as a method of payment?

Objectives and Benefits

The purpose of this study is to produce the following output:

1. To find out and analyze the Positive abnormal return on the company's shares on the Indonesian Stock Exchange around the announcement date of the Merger and Acquisition
2. To determine whether there are significant differences in average abnormal return on the shares of companies that pursued mergers and acquisitions with cash payment, compared to those shares of companies that undertake mergers and acquisitions with stock payment.

Literature Review

In summary, Fama in Jogyanto (2005, 18) classifies information based market efficiency, into 3 types:

1. Weak form of market efficiency
   Market is said to be efficient in a weak form if prices of securities fully reflect past information.
2. Semi-strong form market efficiency
Markets are semi-strong efficient if securities prices fully reflect all published information.

3. Strong form market efficiency
Markets are efficient in the strong form if securities prices fully reflect all available information, including private information.

The market is said to be in-efficient if there is one or more market participants able to enjoy abnormal returns in the long term.

Merger is the act of joining two or more companies to form a larger one, by continuously maintaining the existence of one of the companies and dissolving the other without liquidation prior to the disbandment. Merging can be done by joining all the shares of all other companies which will be joined into one with a single company selected to serve as the resulting, retained company. Merged companies usually select together to use one of either names of the involved companies (Kasmir; 2005: 51).

There are several goals for a company to do mergers and acquisitions, namely:

a) Buying another company may bring benefit, in which it would be cheaper to buy the company’s assets rather than buying directly.

b) Rapid growth is often much easier to implement through mergers rather than internal growth.

c) Diversification of the product and to obtain professional staff by buying other companies.

d) The company will gain synergy when the combined company’s net income is higher than the amount of net income prior to the merger.

An event study is a study that studies the market reaction to an event, in which information concerning the event is published as an announcement (Jogiyanto, 2007; 411). An event study can be used to test the information content of an announcement and can also be used to test the semi-strong form market efficiency. Event study describes a technique of empirical financial research that enables an observer to assess the impact of an event towards the company's stock price. This study looked at the impact of the announcement information to price securities. Event study research is generally related to how quickly the information coming into the market can be reflected in share prices.

Testing and test information content semi strong form of market efficiency are two different tests. Testing information content is meant to see the reaction of an announcement. If the announcement contains the information, it is expected that the market will react when the announcement was received by the market. The market reaction is indicated by a change in the price of the securities concerned. This reaction can be measured by using the return as the value of price changes or by using abnormal return.
Mergers and acquisitions is one of the important events that may affect the company's stock price. The announcement of a corporate merger and acquisition will be responded by the market. The response can be reflected by the positive response from the increase in stock prices or in the form of negative response which is characterized by a decrease in stock prices. The increase or decrease in stock prices will affect the amount of stock returns earned by investors. Investors certainly always want a positive return of any stock price changes.

According to Tandelilin (2010, 240), the standard methodology usually used in the event study, are namely:
1. Collect samples
2. Identify the day of the announcement / event
3. Specify the period of analysis
4. Calculating the return of each sample every day during the observation period.
5. Calculate the abnormal return
   Abnormal return is calculated by subtracting the actual return with the expected return.
6. Calculate the average abnormal return all samples every day.
7. From the data obtained, we can describe the influence of the event to price changes during the observation period specified.
8. The data obtained is then described and summarized to determine the impact of the announcement of the price changes that occur.

According Tandelilin (2010, 566), event studies of mergers and acquisitions is a conventional event study in which study the market response to events that occur frequently and publicly announced by the issuer in the capital markets.

Hypothesis
The design of the hypothesis test of this study was to test the effect of the independent variables, namely the announcement of mergers and acquisitions on stock return as the dependent variable. From the above framework, the proposed hypothesis are presented as follows:

Hypothesis 1 : There is positive abnormal return (AR) positive on the company's shares on the Stock Exchange around the merger announcement date, with the following statistical hypothesis:
\[ H_0 : AR = 0 \] : there is no positive abnormal return around the announcement date of mergers and acquisitions;
\[ H_a : AR > 0 \] : there is a positive abnormal return around the announcement date of mergers and acquisitions

Hypotesis 2 : Average abnormal return Merger and acquisition announcements using cash as a method of payment is greater than the announcement Mergers and acquisitions using stock as a method of payment.
\[ H_0 : AR_{\text{cash}} < AR_{\text{stock}} \] : AR Merger and acquisition announcements by cash payment is not greater than the AR with the stock payment methods.
Ha : AR cash > AR stock : AR Merger and acquisition announcements by cash payment is greater than the AR with the stock payment methods

Data and Research Methodology

The method of this research used a method of verificative and descriptive event study approach. The samples used in this research are companies listed on the Indonesia Stock Exchange that announced their mergers and acquisitions in the year 2005-2011 and acquired 20 companies to 10 companies using cash payments and 10 companies using the stock payments. The method of analysis used in this study is event study method, which is to observe the company's stock price and then calculate the average abnormal return before and after the merger issue.

Abnormal return is the difference between the actual return with the expected return expected by investors. For that the abnormal return calculation is done through the following steps:

1. **Actual return**
   - Actual return (profit share) is the profit earned from the investment during the period of observation, obtained by the following formula:
     \[
     R = \frac{P_t - P_{t-1}}{P_t - 1}
     \]
   - Caption:
     \( R_{it} \): advantage stock i at time t
     \( P_t \): share price i at time t
     \( P_{t-1} \): stock price i at time t

2. **Expected return**
   - Model expectations can be formed using Ordinary Least Square regression techniques, with the following equation:
     \[
     R_{ij} = \alpha_i + \beta_i R_{Mj} + \epsilon_{ij}
     \]
   - Caption:
     \( R_{ij} \): return realization stock i at time -j
     \( \alpha_i \): intercept for stock ke-i
     \( \beta_i \): koefisien slope yang merupakan Beta dari saham ke-i
     \( R_{Mj} \): return of the market index during the estimated period j, that can be counted with the formula \( R_{Mj} = (\text{IHSG}_j - \text{IHSG}_{j-1}) / \text{IHSG}_{j-1} \) with \( \text{IHSG} \) being the Indeks Harga Saham Campuran
     \( \epsilon_{ij} \): residual error of the stock I during the estimated period j

3. **Abnormal Return**
   - Abnormal return can be counted with the formula:
     \[
     AR_{it} = R_{it} - E(R_{it})
     \]
   - Description:
     \( AR_{it} \): abnormal return of the stock-i of the event period-t
     \( R_{it} \): actual return of the stock-i of the event period-t
**E(R\text{it})** : expected return of the stock-i of the event period-t

4. **Average Abnormal Return**
   
   Average abnormal return can be counted with the formula:
   
   $$AAR_t = \frac{\sum_{i=1}^{k} AR_{i,t}}{k}$$
   
   description:
   
   - $AAR_t$ : average abnormal return on the day-t
   - $AR_{i,t}$ : abnormal return for the stock-i on the day-t
   - $k$ : number of stock affected by the event announcement

5. **Cumulative Average Abnormal Return**
   
   Cumulative Abnormal Return can be counted with the formula:
   
   $$CAAR_t = \sum_{a=t3}^{a} AAR_a$$
   
   description:
   
   - $CAAR_t$ : cumulative average abnormal return on the day-t
   - $AAR_a$ : average abnormal return on the day-a, that is starting from $t3$ (first day on the window period) until day-t

   Testing on the abnormal return aims to look at the significance of the abnormal return for the event period. The significance of the question is that there will be a statistically significant abnormal return around the announcement date of mergers and acquisitions, not one-sided (one-tailed t-test) was used for this purpose. Testing the hypothesis of the abnormal return using some level of significance ($\alpha$), ranging from 10% to $\alpha = 1\%$. The event period used in this study was 60 days, ie from $H-30$ to $H+30$ days after the announcement of Mergers and Acquisitions. And to estimate the period is 30 days, ie from $H-60$ to $H-31$.

RESULT

The data used in this study are

2. Data's closing stock price of each company during the 60 days of analysis. Period of data required will vary, depending on when the announcement of the Merger and Acquisition in each company.
3. Data Composite Stock Price Index during the 60 days of analysis. IHSG data period used is the same as the period's closing stock price data for each object of research, which depends on the time when the announcement of the Merger and Acquisition.

   The samples in this study were divided into 2 groups, with the announcement of stock mergers and acquisitions using cash payment method (Payment 1, P1), and the group shares using stock payment method (Payment 2, P0).
Based on the calculation of Average Actual Return, the announcement of the Merger and Acquisition of the entire sample of actual return a negative result. At payment method P1 with a negative average actual return occurs successively from H-1 to H+1 then followed H to H+3,+5 and the lowest values obtained at H+7 at -0.02920 and the highest value obtained in H+8 of 0.00840. For payment method using the stock (P0), Average actual negative returns occur in consecutive at H-9 to H-6 and H-2 followed by H+2 and H+11 to H+15 with the highest value reached 0.0658 at H+9 and the lowest value in the H-6 at 0.04024.

Positive Market return as much as 15 days and as many as 16 Market negative return days. Lowest point occurred on H-1, 1 day before the date of announcement of the Merger and Acquisition of -0.00911 and the highest point on the H-9 at 0.00654.

For payment method on P1, negative values occur in succession around the announcement date of the Mergers and Acquisitions on the H-1 to H+7 where the H+7 is the lowest point on the Market return of -0.01589 P1 and the highest point on the H-5 of 0.0618.

As for the method of payment using the stock (P0) are the highest and lowest points on the day prior to the announcement of mergers and acquisitions are on the H-9 to the highest point at 0.01121 and the lowest point occurred on the H-10 of -0.00803.

For the average expected return, return fluctuate before and after the announcement of the merger and acquisition events. Highest and lowest points occurred shortly
before the announcement that the H-9 as the highest point at 0.0037 and -0.0075 on the H-10 at its lowest point.

For payment method (P1) Average expected negative return value is dominant although not significant when compared to the method of payment occurs P0. The highest point on the H-5 prior to the announcement of Mergers and Acquisitions and the lowest point at 0.0028-0.0063 announced just in time for the event.

As for the method of payment using stocks (P0) occur consecutively Average expected positive return that is happening in H-5 and H+2 then followed back to the H to H+15, +8 to -0.0050 lowest point of the H-10 prior to publication implementation of Mergers and Acquisitions. While the highest point of 0.0141 occurred at 5 days after the announcement of the event Mergers and acquisitions (H+5).

At AAR P1, a positive signal occurred respectively in H-4 to H-0 followed by negative AAR H +1 to H +5. AAR has decreased dramatically in the days after the incident in which the lowest point reached at H +7 -0.0307 and 0.0223 on the H-12 as the highest points.

As for the AAR P0, seen a positive reaction with the highest points on the H-2 reaches its lowest point at 0.0044 and 0.0211 occurs at H +8. Dominant negative signal occurred in the days before the announcement of the Merger and acquisitions occurred in consecutive H-15 to H-12 and H-10 followed by H-6.

Overall Cumulative average abnormal return during the event period Mergers and acquisitions provide a positive signal 0.0082. CAAR consecutively are positive values from H-3 to H +15 after the announcement of the merger and acquisition announcements.

Cumulative average return for financing mergers and acquisitions using cash (P1), overall positive value of 0.3486. Although based on the graph 4.5 indicates that the reaction of the market declined after the announcement. Consecutive negative signal occurs from H to H +15 +7 with the lowest points of the H +9 -0.0322 and 0.0529 reaching the highest point on the day of publication of the announcement of mergers and acquisitions is in H0.
While the method of payment using the stock (P0), CAAR overall negative value of -0.6383. Adverse reactions occurred successively from H-15 to H+5,+6 whereas H to H+15 gave a positive signal in which the highest point reached 0.0487 at H+13 and the lowest point reached -0.0748.

Discussion

Based on calculations announcement Mergers and Acquisitions resulting value average abnormal return (AAR_P1) company shares using the method of payment in cash has decreased, especially the events H + (after the announcement) when compared to payments using stock average abnormal return (AAR_P2) overall signal positive despite a slight decline at 2 days after the date of the announcement but the market back again to form a new equilibrium value H to H +12 +8.

Cumulative average abnormal return (CAAR) is useful to describe the magnitude of average abnormal return (AAR) all of the shares until the day t and the value of these calculations can be seen whether the announcement of mergers and acquisitions have a positive impact or a negative for investors. The overall effect can be seen at the end of the period of analysis (H +15). If at H +15 CAAR is positive, it can be concluded that the announcement of mergers and acquisitions have a positive impact and vice versa.

For company shares using stock payment method (P2), H +15 CAAR to obtain a positive result of 4.6%. This gives a signal that the event announcement Mergers and Acquisitions provide a positive impact on stock-sham companies using stock payment method. This is in line with the theory of Efficient Market Hypothesis semi strong form (semistrong form) which states that if the prices of securities fully reflect (fully reflect) all published information (all publicly available information) (Jogiyanto, 2005; 19).

Based on the results of the normality test data on the average abnormal return doperoleh results:

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Asymp. Sig</th>
<th>A</th>
<th>Keterangan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Abnormal return (AAR) P1</td>
<td>0.584</td>
<td>0.05</td>
<td>Pass</td>
</tr>
<tr>
<td>Average Abnormal return (AAR) P2</td>
<td>0.999</td>
<td>0.05</td>
<td>Pass</td>
</tr>
</tbody>
</table>

From the table above, it appears that the entire sample passes the Kolmogorov-Smirnov normality test. This is evident from the significant value of each sample for 31 day event period is greater than α of 5%.

Based on the test hypothesis 1 with One-tailed t test, Average Abnormal Return (AAR) either before, around and after the announcement of the merger and acquisition events. There Average Abnormal Return (AAR) positive surrounding the announcement date of mergers and acquisitions are on the H-3 and H +2 9.4343,
respectively for 6433 and with a significance level $\alpha$ at 5% and 10%. With this, indicating that the announcement of mergers and acquisitions resulted in a positive market reaction because it contains loads of information and it is good news for shareholders.

AAR significant that prior to the announcement date of mergers and acquisitions seen in H-9, H-5 and H-3 to the size of a row 6.8303, 12.4619, and 9.4343 with a significance level at $\alpha = 5\% - 10\%$. This indicates that the information about it in general is out to the public or any prior information leakage prior to the announcement, because it is generally already included in the agenda of the General Meeting of Shareholders (AGM).

The market is said to be efficient when reacting to an incident by establishing a new equilibrium or equilibrium price. According Jogiyanto (2003: 390) that information long enough to be evaluated by investors is the merger and acquisition information. To determine this information as good news or bad, investors may still need more information, and take a long time to evaluate it. As a result, the market reaction to this kind of information occurred within a period of time long enough. In this study, the estimated time is less than 15 days after the announcement of mergers and acquisitions. Therefore, the authors assume that the market reaction is rapidly occurring surrou H $+10$ to H $+15$ to establish a new equilibrium price. And based on the results of the calculations indicate that the market is forming a new equilibrium at H $+15$ so it can be concluded that the market is semi-strong form efficient information.

Test results for a cash payment method (P1) market said to be efficient if it can react to an event by establishing a new equilibrium or equilibrium price. According Jogiyanto (2003: 390) that information long enough to be evaluated by investors is the merger and acquisition information. To determine this information as good news or bad, investors may still need more information, and take a long time to evaluate it. As a result, the market reaction to this kind of information occurred within a period of time long enough.

In this study, the estimated time is less than 15 days after the announcement of mergers and acquisitions. Therefore, the authors assume that the market reaction is rapidly occurring surrou H $+10$ to H $+15$ to establish a new equilibrium price. And by Table 4.7 shows that the market is forming a new equilibrium at H $+15$ so it can be concluded that the market is semi-strong form efficient information.

For the method of payment in shares (P2), the event Mergers and acquisitions pembaaran method using stock market response occurs very quickly. Abnormal return occurred on the day before the announcement indicating that the information has been circulating in the public. This means that there is leakage of information occurs. Based on the table above, it appears that the market response occurs very quickly, because the abnormal return does not happen after the announcement, but rather occurs when H0. This shows that the market is efficient.
Based on the results of testing Hypothesis 1, it can be deduced that the event announcement Mergers and acquisitions result in positive abnormal returns for shareholders. This is because there is a positive abnormal return around the time period between the H-15 and H+15. It also occurs in AAR with cash as a payment method and payment method using the AAR shares.

And based on previous calculations it can be concluded that both announcements Mergers and acquisitions using cash and shares alike a positive abnormal return. Merger and acquisition announcements of events and their method of payment either in cash and stocks provide good news for our shareholders, and the holders of sham certainly responded well to the event.

This is consistent with research conducted by Moeller, Schlingemann and Stulz in 2004 that the method of payment for the Mergers and acquisitions by either cash or shares alike abnormal return is positive and significant around the announcement date of the H-1 to H+1. And a study done by Jianyu, Pagan and Yun (2009) in his journal that examines the market response to the announcement of mergers and acquisitions that states there is a positive abnormal return around the event date (H0-H+1, H-1, H+1 and H-2, H+2) announcement of Mergers and Acquisitions.

The results of the test hypothesis 1 also shows that the testing efficiency of the market half a robust (semi-strong form) in Indonesia shows that the market is efficient. This is shown in the rapid market response indicated that the market achieve the new equilibrium point on the surrounding H+10 and H+15 after the announcement of mergers and acquisitions. Hypothesis 2 in this study aimed to analyze whether there are differences in a positive average abnormal return from event announcements Mergers and Acquisitions with a cash payment method (P1) and stock (P2). Tests using independent sample-test Levene's test, is obtained:

**Hypothesis Testing – Average Abnormal Return**

**Independent Samples Test**

<table>
<thead>
<tr>
<th>Paired Difference</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>T</th>
<th>df</th>
<th>Sig (1-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 AAR P1-AAR P0</td>
<td>0.00142</td>
<td>0.03821</td>
<td>0.00379</td>
<td>0.372</td>
<td>30</td>
<td>0.711</td>
</tr>
</tbody>
</table>

Based on the table above, the value of count Independent samples t-test for 0.372 with a probability of significance 0.711. Value of t-table with df of 30 and α = 0.05 is 1.697. Since the obtained value of t-count is smaller than t-table means that the null hypothesis is accepted, Average abnormal return Merger and acquisition announcements using cash is not greater than the Average abnormal return announcement Mergers and acquisitions using stock.
The announcement of mergers and acquisitions either by using cash and stock as a method of payment together generate positive average abnormal return. According to the second hypothesis, based on this study that generated cash AAR is no bigger than stock. It is indicated that shareholders consider the use of stock as a payment method Mergers and acquisitions more profitable. According to research conducted by Mahmoud Hassan et al (2007), the views of the payment method Mergers and acquisitions using cash and stock. That cash offerings more attractive, because for the acquirer (bidder) offers premium cash generating more substantial than stocks. Due to the management of the company will use the cash offerings bidder if it is known that the company's stock market value is below fair value or so-called undervalued. And by using a cash offer, expected to raise the company's stock price bidder.

Rejection of H1 and H0 receipt showing that using stock as a method of payment for the market responded positively. According to research conducted by Mara Faccio and Ronald W. Masulis in 2004, the method of payment bidders are in the range of 2 poles, the control of the company that led to the decision to use non-stock financing and financial shackles that led to the decision to use stock financing. Stock selection as a method of payment for the Mergers and acquisitions are affected by the weakening financial condition of the bidder ie elements collateral management, leverage and debt capacity and the size of the bidder company itself.

Conclusions and Recommendations

Based on the discussion and analysis of the hypothesis, it can be concluded as follows:

1. There is a significant positive abnormal return at the announcement event, indicating that the announcement of mergers and acquisitions resulted in a positive market reaction because it contains loads of information and it is good news for shareholders.
2. There is a significant AAR prior to the announcement of mergers and acquisitions, indicating that information about them in general is out to the public or any prior information leakage prior to the announcement, because it is generally already included in the agenda of the General Meeting of Shareholders (AGM).
3. Average abnormal return on the announcement of the merger and acquisition using cash is not greater than the average abnormal return to the stock as a payment method to undertake mergers and acquisitions.

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