CHANGES IN ECONOMIC VALUE ADDED AND MARKET VALUE ADDED IN COMPANIES LISTED IN INDONESIA STOCK EXCHANGE BEFORE AND AFTER MERGERS AND ACQUISITIONS: AN EMPIRICAL STUDY

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ABSTRACT

Objectives: to find out the empirical evidence of the differences in Economic Value Added (EVA) and Market Value Added (MVA) before and after the companies carry out mergers and acquisitions.

Methods: the research method used is quantitative with a comparative study. The study sample included 17 companies listed on the Indonesia Stock Exchange in the year of observation, which is 2010 to 2012. The sample provisions were companies that merged and acquired conducted an Initial Public Offering (IPO) in the year before the company carried out mergers and acquisitions. The dependent variable used is Economic Value Added (EVA) and Market Value Added (MVA).

Results: the means value of EVA companies before and after mergers and acquisitions respectively were 16.76 and 18.24. The mean MVA of companies before and after mergers and acquisitions respectively were 16.23 and 19.83. The significance of the increase in EVA and MVA of companies before and after mergers and acquisitions respectively were 0.831 and 0.309 (significance level α <0.05).

Implications: the results of the study indicate that there was an increase in EVA and MVA after mergers and acquisitions. It will be better if the company can choose investments in the form of mergers and acquisitions that are able to produce high returns for investors. Therefore, performance appraisal with EVA and MVA can provide improved or good results.
Changes in Economic Value Added and Market Value Added in Companies Listed in Indonesia Stock Exchange before and after Mergers and Acquisitions: An Empirical Study

Key words: Economic Value Added, Market Value Added, merger and acquisition, financial performance measurements

http://www.iaeme.com/IJM/index.asp?JType=IJM&VType=11&IType=6

1. INTRODUCTION

Mergers and acquisitions are currently expanding, and the numbers are increasing dramatically in the United States, Europe, and other countries around the world (Ramana, 2005; Calipha, Tarba and Brock, 2010; Harrison, O’Neill and Hoskisson, 2016; Srivastava, 2018). Mergers and acquisitions are forms of unifying of business entities (Srivastava, 2018). Merger and acquisition activities are increasing along with the increasingly globalized economic development. The use of EVA and MVA as an approach to measure financial performance based on conventional performance gains and based on accounting earnings ('income' or equity income), and the size of derivatives Earnings Per Share (EPS), Return on Capital Employed (ROCE), or indeed at cash-based steps such as Free Cash Flow (FCF) (Ehrbar, 1999; Zafiris and Bayldon, 1999; Worthington and West, 2001). The use of EVA and MVA is as a measure of financial performance in companies in the United States, the United Kingdom, Malaysia, and other countries. However, the effectiveness of using EVA and MVA as a measure of financial performance is still diverse (Galdeano et al., 2019; Ferguson, Rentzler and Yu, 2009; Kumar and Sharma, 2011).

The Business Competition Supervisory Commission (KPPU) noted an increase in the notifications number of mergers and acquisitions in 2011, of which one third involved foreign elements. The number is predicted to increase if it is seen from a survey result of the United Nations Conference on Trade and Development (UNCTAD) on 159 transnational companies in 2012 which ranked Indonesia as the fourth most favourable investment destination after China, the United States, and India. In the same year, UNCTAD also reported the total value of the foreign direct investment in developing countries which surpassed developed countries for the first time (Sohrabi, 2017).

The total value of cross-border mergers and acquisitions in Indonesia fluctuated in the last ten years and reached its peak in 2011 of US$ 6.8 billion (Haseeb & Azam, 2020). In 2012, the total value reached US$ 477 million. The decline in the value of merger and acquisition transactions in 2012 was due to the global economic slowdown in most of the world economic regions. However, the rebound in global GDP growth that occurred in 2013 brought up to optimism for economic improvement. In 2013, the total value of mergers and acquisitions increased by 77% with transactions reaching US$ 844 million. Until 2016, the KPPU estimated that the mergers and acquisitions were increasing in line with the enactment of the ASEAN Economic Community (AEC).

The performance of a company is reflected in the company's financial statements that contain company financial data for a certain period, commonly 1 (one) year. Status of public corporation or ‘go public’ that is carried by a company will facilitate the public, investors, or other interested parties to assess company performance because the company's financial statements are open, which means it can be published to the general public. This study aims to find the empirical evidence of the differences in EVA and MVA before and after the companies carry out mergers and acquisitions.
1.1. Theoretical Framework

Mergers and acquisitions are strategic steps from the form of external expansion of the company to maintain the ‘going concern’ principle. Mergers and acquisitions are considered the fastest way to access new markets without having to build a company from scratch. The success of the company in carrying out mergers and acquisitions can be seen through the performance of the company, especially on financial performance. Changes that occur after mergers and acquisitions will usually appear on the company's financial performance which can be seen from the company's financial statements. As previously explained, the motivation of companies to carry out mergers and acquisitions is based on the motivation of synergy (Zang, 2020). The manifestation of synergy is the overall values of the company after carrying out mergers and acquisitions that is larger than the companies running their own operations. The synergy occurring in the companies that carry out mergers and acquisitions will be reflected in the company's financial performance. After having those explanations, the literature review has been performed to support the formulations of hypotheses. Therefore, the theoretical framework which states that the company’s performance which shows synergy after mergers and acquisitions can be measured by the value-added approach consisting of Economic Value Added (EVA) and Market Value Added (MVA).

This study provides a framework of thinking to simplify the above explanation and description as follows:

![Figure 1 Framework](http://www.iaeme.com/IJM/index.asp)

The hypothesis in this study are:

Capital investment by the company through mergers and acquisitions will have a good impact on either the company or shareholders as investors. Through synergies obtained as a result of mergers and acquisitions, the average cost per unit will decrease because of the increase of economies of scale and also the financial synergy in the form of capital increases will be achieved.
In general, after mergers and acquisitions are carried out, the size of the company will increase. It is because the assets, liabilities, and equity of the company combined together. The increasing size of the company added with the synergy resulted from a combination of simultaneous activities will give an influence on corporate profits that also increase. The increased profit indicates that the company is able to improve performance during a period. The increase in performance is reflected in the returns on investment given to investors that are higher than the level of capital costs incurred by the investors. This matter reflects that EVA also has an increase or even a positive value.

The ability of the company to create prosperity and satisfaction for investors will influence the investment decisions made by investors as the external stakeholders. The investments made by those investors are a form of stakeholder support and the company is assuredly influenced by this support. Good company performance will provide good feedback for stakeholders because the stakeholders are the supporting factors that are important for achieving company goals. This is in line with the stakeholder theory proposed by previous research (Gray et al., 1997; Freeman, 2010). Therefore, the performance realized from EVA and MVA after mergers and acquisitions should be better than before mergers and acquisitions. This analysis is supported by previous research which stated that MVA after mergers and acquisitions obtained a greater value, which means have an increase in value than before mergers and acquisitions (Fatmawati and Rikumahu, 2013; Suksod & Cruthaka, 2020). Moreover, this is similar to an increase in EVA after companies carry out mergers and acquisitions that are in line with previous research (KANAHALLI and JAYARAM, 2015).

Based on the explained description, the hypotheses formulated in this study are as follows:

H1: There are differences in the value of Economic Value Added (EVA) before and after mergers and acquisitions.

H2: There are differences in the value of Market Value Added (MVA) before and after mergers and acquisitions.

2. METHODS

This research is a comparative study performed to analyse the comparison of a variable to other variables between before and after a factor occurs. The dependent variable in this study is EVA and MVA before and after companies carry out mergers and acquisitions. The EVA concept is a measure of the company's financial performance that is better than financial ratio analysis. Economic Value Added (EVA) is after-tax profit minus the cost of capital (Mowen, Hansen and Heitger, 2013). Economic Value Added (EVA) measures value-added by reducing the cost of capital arising from investments made by the company. Market Value Added (MVA) is the difference between the company's market value (including equity and debt) and the overall capital invested in the company (invested capital) (Young and O’Byrne, 2000). MVA is an external rating factor for the company from the value-added concept because MVA reflects market expectations of the company in the future. Both of these variables are used to compare two groups formed, namely: before the company carries out mergers and acquisitions and after the company carries out mergers and acquisitions.

The study was conducted on 17 companies listed on the Indonesia Stock Exchange that carried out mergers and acquisitions in 2010-2012. The determined inclusion criteria to choose as the sample are; i) The company under study is a company listed on the Indonesia Stock Exchange in the year of observation, which is from 2010 to 2012; ii) Issue audited financial statements and publish them on the Indonesia Stock Exchange website (www.idx.co.id); iii) Companies that include manufacturing industries and other industries that have gone public; iv) The company that becomes the object of research is the company
that merged and acquired conducted an Initial Public Offering (IPO) in the year before the company carried out mergers and acquisitions.

The test statistic is the paired t-sample test used to compare EVA and MVA. Each variable is divided into two groups, namely before mergers and acquisitions (data from 2008 to 2011) and after mergers and acquisitions (data from 2012 to 2014). The significance value set is α <0.05. To assess the significance of the difference in the increase in EVA and MVA before and after mergers and acquisitions is by using the Wilcoxon Signed Rank Test with a significance level of α <0.05.

2.1. Dependent Variable Measurement

The EVA variables are measured using equations (Zafiris and Bayldon, 1999; Brigham and Daves, 2004):

\[
EVA = NOPAT - \text{cost of capital} = EBIT (1 - \text{Tax}) - (IC \times WACC)
\]

Notes:
EVA = Economic Value Added
NOPAT = Net Operating Profit After Tax
IC = Invested Capital
WACC = Weighted Average Cost of Capital

The MVA variable is measured by the following steps:

1) Company value = Number of shares outstanding \times Share price (Brigham and Daves, 2004)
2) IC = (total amount of debt + equity) - short-term debt (Young and O’Byrne, 2000)
3) MVA = Company value – Invested Capital (Brigham and Daves, 2004).

3. RESULTS

Table 1. describes the results of the company before and after carrying out mergers and acquisitions. The largest difference in the average of Economic Value Added (EVA) for companies that have carried out mergers and acquisitions during the observation period with a value of 13722013.00 was in 2011. The most minimum Economic Value Added (EVA) average for companies after mergers and acquisitions during the observation period with a value of -2028702.00 was in 2012. The average value of Market Value Added (MVA) before carrying out mergers and acquisitions was 3903706.1765, while the average value of Market Value Added (MVA) after carrying out mergers and acquisitions was 10336538.8824. The largest average Market Value Added (MVA) for sample companies during the observation period with a value of 84220367.00 was in 2012, while the smallest average Market Value Added (MVA) for sample companies during the observation period with a value of -116702990.00 was in 2012.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVA 1</td>
<td>34</td>
<td>-614846.00</td>
<td>1604913.00</td>
<td>106706.5588</td>
<td>464660.17794</td>
</tr>
<tr>
<td>EVA 2</td>
<td>34</td>
<td>-2028702.00</td>
<td>13722013.00</td>
<td>529039.5294</td>
<td>2460828.57179</td>
</tr>
<tr>
<td>MVA1</td>
<td>34</td>
<td>-51779664.00</td>
<td>84220367.00</td>
<td>3903706.1765</td>
<td>21708944.42059</td>
</tr>
<tr>
<td>MVA 2</td>
<td>34</td>
<td>-116702990.00</td>
<td>215215004.00</td>
<td>10336538.8824</td>
<td>58146296.45154</td>
</tr>
</tbody>
</table>

Notes: 1 = before mergers and acquisitions  2 = after mergers and acquisitions
Difference between EVA before and after mergers and acquisitions

The mean rank value for the category of EVA after mergers and acquisitions is higher at 18.24 while the mean rank for the category of EVA before mergers and acquisitions is lower at 16.76 (mean rank after mergers and acquisitions > mean rank before mergers and acquisitions).

Difference between MVA before and after mergers and acquisitions

The mean rank value for the category of MVA after mergers and acquisitions is higher at 19.83 while the mean rank for the category of MVA before mergers and acquisitions is lower at 16.23 (mean rank after mergers and acquisitions > mean rank before mergers and acquisitions).

Significance of difference between EVA and MVA before and after mergers and acquisitions

Table 2

<table>
<thead>
<tr>
<th>Variables</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVA</td>
<td>0.831*</td>
</tr>
<tr>
<td>MVA</td>
<td>0.309*</td>
</tr>
</tbody>
</table>

Notes:
Significance level: p value < 0.05
* = not significantly affect  ** = significantly affect

4. DISCUSSION

The merger and acquisition process has four distinct phases, namely strategic planning, candidate screening, due diligence and implementation of the agreement, and the final integration process. Efforts towards integration during the post-merger integration period are very important for the performance of reciprocal relations to potential exploitation that synergize with a company merger, integration approaches, national and corporate culture so that the effect on the success of international mergers is eventually unclear (Calipha, Tarba and Brock, 2010). The results showed that EVA and MVA experience changes after mergers and acquisitions. However, the changes that occurred were not significant.

The increase of EVA after mergers and acquisitions of the company shows the company's ability in choosing investments with optimal returns and minimum risk. Thus, it results in a higher return on investment than the level of capital costs incurred by the company in investing (Keown et al., 2005). The value of EVA can increase only if the company gets a Return on Capital (ROC) that exceeds the Weighted Average Cost of Capital (WACC) on some of its investments (Zafiris and Bayldon, 1999). Meanwhile, an increase in MVA of a company after mergers and acquisitions shows the ability of the company to run a higher investment value than the capital that is delivered to the company by the capital market.

The small mean of EVA indicates that the company does not have the ability to create an increase in value for the company itself (Keown et al., 2005). In addition, the company under research also does not have the ability to choose investments that have an optimal rate of return with a minimum risk compared to other companies during the research period. It makes the rate of return on the investment made by the company lower than the cost of capital incurred. The large mean of MVA shows that the company is able to improve the welfare of investors realized from the stock market value of the company that is higher than its actual value (Keown et al., 2005). Conversely, a small mean of MVA indicates that the company
management has not been able to maximize the capital delivered to the company by the capital market, so it results in low investment value.

The results showed that there were no significant differences in EVA and MVA either before or after mergers and acquisitions. This insignificant change in EVA occurred because EVA is able to increase significantly over a long time. The current EVA results present an accumulation of economic values from year to year so that the achievement of synergy after mergers and acquisitions requires a relatively long time. When the synergy of mergers and acquisitions has been achieved, so the level of prosperity and investor satisfaction will reach an optimal level. The insignificant changes in MVA indicate that an increase in MVA does not have a quiet strong effect. The increase occurs only in small amounts so that it cannot affect the level of prosperity and investor satisfaction with the company.

The economic value of the company that has decreased after the company carried out mergers and acquisitions is an accumulation of low economic value from year to year and begins when after mergers and acquisitions are carried out. It shows that the synergy as the reason for mergers and acquisitions has not been achieved in the period of the research, exactly in the fourth year to the fifth year after mergers and acquisitions have been carried out. Certain adjustments are needed by the company over a relatively long time period of the year of the research so that the company's performance after mergers and acquisitions which is measured by EVA can be increased and the synergies can be realized. In this case, the mergers and acquisitions carried out have not had a good impact if assessed by EVA.

The increase in operating profit after tax does not necessarily increase the value of EVA. It is because the increase in operating profit can result in an increase in business risk faced by the company if the increase does not come from internal efficiency but rather from the investment in new business fields. The increase in risk will have consequences on the expected rate of return that will ultimately increase the cost of capital. Moreover, EVA still depends on the capital structure that will determine the level of financial risk and capital costs.

There was an increase in MVA but it had not a strong effect indicating that the increase was not optimal. The increase in performance that is not optimal has a direct impact on MVA. The increase in MVA can be seen through the increasing market valuation of the company's market value compared to the actual value of the company. From a high market valuation, investors expect an optimal rate of return on the investment they make. According to the results of the research obtained, the company has been able to increase the market valuation of the company's value to be higher than the actual value of the company, but it is still not optimal. It is able to affect the level of prosperity and satisfaction of investors as the company's external stakeholders. Therefore, the level of prosperity and investor satisfaction will increase along with the increase in MVA even though the increase has not been optimal.

5. CONCLUSION
There is an increase in the company's EVA and MVA after mergers and acquisitions. However, the increase that occurs is not significant. It can occur because of the less long research time, so the results of mergers and acquisitions cannot be observed more widely. If the company is able to choose investments in the form of mergers and acquisitions that can produce high returns for investors, so the evaluation of performance with EVA and MVA will increase or even becomes good.

REFERENCES
Changes in Economic Value Added and Market Value Added in Companies Listed in Indonesia Stock Exchange before and after Mergers and Acquisitions: An Empirical Study


