THE EFFECT OF ECONOMIC VALUE ADDED (EVA), MARKET VALUE ADDED (MVA), Refined Economic Value Added (REVA) ON STOCK PRICES AND STOCK RETURNS IN MANUFACTURING COMPANIES LISTED IN INDONESIA STOCK EXCHANGE

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Abstract
The development of stock returns of manufacturing companies shows fluctuating movements from year to year. Return movements like this indicate that the condition of the manufacturing company is unstable so that it has an impact on the resulting stock returns. This uncertainty will certainly create its own concerns for investors who will invest in shares in manufacturing companies. With this, it is important for investors to analyze the company's condition first so that the investment made can provide returns. One aspect of the company that can be assessed by investors is the company's performance through financial statements. Helfert (2012: 98) grouped company performance measurements into three groups, namely (1) Earning Measures, (2) Cash Flow Measures, (3) Value Measures. Performance measurement based on value measures is economic value added (EVA), market value added (MVA), and refined economic value (REVA). This performance measurement holds the view that increasing value means also increasing long-term shareholder investment returns. Steward (2013: 115) states that value measures are considered to have capabilities that exceed Another performance measurement, because it takes into account all factors related to the creation (value) of the company that have an impact on the increasing prosperity of shareholders. The purpose of this study is to test EVA, MVA, and REVA against stock prices and stock returns. In this study using a research sample of 104 manufacturing companies taken through random sampling in the period 2014-2016. Data analysis and hypothesis testing in this study used the Partial Least Square Path Modeling (PLS-SEM) method.
The results of this study show that EVA, MVA, and REVA have a significant positive relationship with stock price and stock return. By looking at the results of this study, it shows that performance appraisal using the EVA, MVA, and REVA methods has a strong influence on stock prices and stock returns. This shows that value-based valuation is important because every investment cannot escape the consequences of the incurring cost of capital as compensation for the funds used to finance the investment. The return on an investment will only mean that if the amount of return exceeds the cost of capital incurred to realize the investment, measurement certainly requires an accurate valuation method.

INTRODUCTION

Capital market is a market for various long-term financial instruments that can be traded. Financial instruments traded in the capital market are such as stocks, bonds, warrants, rights, and various other products. The capital market provides a large role for a country's economy because the capital market provides two functions at once, namely the economic function and the financial function. The capital market is said to have an economic function because the capital market provides facilities or vehicles that bring together two interests, namely those who have funds (investors) and those who need funds (issuers). The capital market is said to have a financial function, because the capital market provides the possibility and opportunity to obtain returns for fund owners (investors), in accordance with the characteristics of the chosen investment (Widjajanta, 2014: 40).

Stocks are the most popular financial instruments by investors. This is proven by the level of transaction frequency that far exceeds the level of transactions in other financial instruments, besides that stocks also have an emission value that far exceeds other financial instruments. Stocks are financial instruments that have a more volatile rate of return than other financial instruments. The uncertainty of stock prices traded on the stock exchange is a problem found on stock exchanges in general. Changes in stock prices from period to period cause stock returns to be uncertain and risky to the capital invested by investors by purchasing shares, especially in manufacturing companies.

In Indonesia, shares of manufacturing companies each year have different return values. In 2010 the return of manufacturing companies was at an average return of 35.06%. In the following year, namely 2011, the average return of manufacturing companies was at a return value of 34.61%, showing a decrease of 0.35% from the previous year, namely 2010. In 2012 the average return of manufacturing companies was at a percentage of 31.62%. This year also experienced a decrease in average return of 3% from the previous year. While in 2013 the return of manufacturing companies in Indonesia experienced a drastic decline, which decreased to -35.36% from 2012 so that the average return in 2013 was at percentage -4.26%. In 2014 the average return of
manufacturing companies in Indonesia experienced a recovery from the previous year which was up to minus -4.26% is at a percentage of 29.80% even though this percentage is not greater than the average percentage return in the previous 2-3 years.

The data above shows that the development of stock returns of manufacturing companies shows fluctuating movements from year to year. Return movements like this indicate that the company's condition is unstable so that it has an impact on the resulting stock returns. This uncertainty will certainly create its own concerns for potential investors who will invest in shares in manufacturing companies.

Investors who will invest by buying shares in the capital market will analyze the company's condition first so that the investment made can provide a return on the amount invested. This is an important activity that needs to be done by investors, namely a careful assessment of issuers. One aspect of the company that investors assess is the company's performance. The performance measure used is the company's financial performance as measured from the company's financial statements (Halim, 2015: 68). This normatively is also the main goal that will be achieved by the company in its financial decisions is to increase the prosperity of company owners and investors (wealth of shareholder) as indicated by the increase in company value and rising stock prices (Husnan and Pudjiastuti, 2012: 3). The company must be able to show good performance in accordance with the expectations of shareholders. The reference used to measure the wealth of shareholders includes the company's performance which is reflected in the company's annual financial report.

Helfert (2012: 98) groups company performance measurements into three categories, namely: (1) Earning Measures, (2) Cash Flow Measures, (3) Value Measures. The company's performance measurement system based on value measures is a periodic performance measurement in the context of changes in value. Performance measurement based on value measures is economic value added (EVA), market value added (MVA), and refined economic value (REVA) which is a development of the form of economic value added (EVA) measurement. This performance measurement holds the view that increasing value means also increasing long-term shareholder investment returns. Steward (2013: 115) states that value measures are considered to have capabilities that exceed Another performance measurement, because it takes into account all factors related to the creation (value) of the company that have an impact on the increasing prosperity of shareholders.

Several previous studies examined the effect of economic value added (EVA) on stock prices, namely the research of Ahmed (2015), and Alipour (2015). The results of Ahmed's research (2015) show a strong relationship between economic value added (EVA) and company stock prices. In the study, it was explained that economic value added (EVA) has a significant influence on stock prices in companies that are the object of research. Alipour research (2015) also confirms that a high economic value added (EVA) coefficient explains the variable stock price of a company, in his presentation explained that the economic value added (EVA) can influence investor decisions in investing.

There have been several previous studies examining the effect of economic value added (EVA) on stock returns. The research is the research of Awan et al. (2014). In the study, Awan et al. (2014) examined the effect of economic value added (EVA) on stock returns on the Karachi Stock Exchange. The results show that economic value added (EVA) has an influence on stock returns. The study further explained that the variable economic value added (EVA) showed a significant influence on stock returns.
In the research of Pourali (2013) and Sichigea (2015), examining the effect of market value added (MVA) as a criterion for company performance. The company's performance criteria in this study are proxied through return and stock price. Pourali's research (2013) shows a positive influence on market value added (MVA) on company performance so that it has an impact on increasing stock prices. This is also described in Sichigea's research (2015). Sichigea's research (2015) states that market value added (MVA) can represent the formation of shareholder value where it can reflect profit (return) on a company or it can be said that market value added (MVA) has a positive effect on stock returns.

Unlike the results of previous studies, some of these studies show different results in testing economic value added (EVA) and market value added (MVA) variables. Some of these studies are the research of Hajiabbasi et al. (2012), Niresh and Alfred (2014), and Nakhaei (2016). In the results of research Hajiabbasi et al (2012) show that economic value added (EVA) does not have a significant influence on shareholder return. This is contrary to the results of research by Awan et al (2014). Meanwhile, in the research of Niresh and Alfred (2014) examining the effect of economic value added (EVA) and market value added (MVA) on stock prices showed different results from previous research that had been described. The results showed no relationship between economic value added (EVA) and market value added (MVA) on stock prices. This is contrary to the results of research by Ahmed (2015) and Alipour (2015). Nakhaei's (2016) research also showed different research results from previous studies. The results of the study show that market value added (MVA) has no influence on the company's stock return.

Based on the background of the problems previously described and differences in the results of previous studies, this study will examine the effect of economic value added (EVA), market value added (MVA), refined economic value added (REVA) on stock prices and stock returns. The results of this study are expected to add empirical evidence to the effect of economic value added (EVA), market value added (MVA), refined economic value added (REVA) on stock prices and stock returns and can also help investors in assessing the company's financial performance.

The hypotheses to be built with respect to the influence of EVA, MVA and REVA on price and return are as follows.

**H1**: EVA has a positive influence on the share price of manufacturing companies listed on the Indonesia Stock Exchange.

**H2**: MVA has a positive influence on the share price of manufacturing companies listed on the Indonesia Stock Exchange.

**H3**: REVA has a positive influence on the share price of manufacturing companies listed on the Indonesia Stock Exchange.

**H4**: The assessment of company performance using the EVA method has a positive influence on stock returns in manufacturing companies listed on the Indonesia Stock Exchange.

**H5**: MVA has a positive influence on stock returns in manufacturing companies listed on the Indonesia Stock Exchange.

**H6**: REVA has a positive influence on stock returns in manufacturing companies listed on the Indonesia Stock Exchange.

**H7**: Stock prices have a positive influence on stock returns in manufacturing companies listed on the Indonesia Stock Exchange.
METHOD

Population

According to Ferdinand (2014: 172), the target population is the focus of a researcher's large target which is a collection or element that has the information sought by the researcher and the results of the study will show an inferential conclusion for the group or population. In accordance with the purpose of this study and referring to the understanding of the target population that has been described as eating the population in this study are all manufacturing companies listed on the Indonesia Stock Exchange for the period 2014-2016 totaling 140 companies.

Sample

Ferdinand (2014: 171) explained that the sample is a subset of the population, the sample is several members of the population. This subset is taken because in many cases it is impossible to examine all members of the population, therefore we form a representative population called a sample. The determination of the number of samples in this study used the Yamane approach method. Ferdinand (2014: 174) explained that sample determination uses the Yamane method

Use the formula as follows:

\[ \eta = \frac{N}{1+Nd^2} \]

where:

\( \eta \) = Number of samples
\( N \) = population size
\( D \) = set precision or percentage.

Based on the Yamane method formula described earlier, the calculation of the number of samples used in this study is as follows:

\[ \text{Parens} \text{Ukuran Populasi (N)} = 140 \text{ senta } D) \text{ 5 sente } = \frac{140}{1+140(5\%)} = 104 \]

Ferdinand (2014: 175) explained that after determining the size or size of the sample to be used, the next process is the sampling process. In management research, two common approaches to sampling that are usually used in the sampling process are probability sampling and nonprobability sampling.

In this study the approach used is probability sampling (the population has the same chance to be selected into a sample). The probability sampling approach was chosen because in this study the objects used in the study have the same characteristics, namely manufacturing companies. In the probability sampling approach method, there are several types of sampling, namely random sampling, systematic sampling, random route sampling, stratified sampling, mutly-stage cluster sampling. In this study, researchers chose the type of sampling, namely random sampling because according to Ferdinand (2014: 176) the use of random sampling is suitable for relatively small populations, where

The sampling frame is "complete and up-to-date" and each prospective sample has the same opportunity as the others to be selected as a sample member.

The random sampling procedure according to Ferdinand (2014: 177) in this study uses the lottery method in the following way:

1. Researchers wrote the names of 140 companies on small pieces of paper and rolled them up and put them in a box to shuffle.
2. After we draw one roll to show which sample we choose, then so on until all of them produce 104 samples drawn.

Data Analysis Techniques
Partial Least Square Path Modeling (PLS-SEM)

Data analysis of this study using the Partial Least Square Path Modeling (PLS-SEM) method using the SmartPLS application. PLS-SEM is a variant-based structural equation analysis that can simultaneously test measurement models as well as test structural models. Measurement models are used for validity and reliability tests, while structural models are used for causality tests (hypothesis testing with predictive models). The purpose of PLS-SEM according to Ghozali (2015: 16) is to test predictive relationships between constructs by seeing if there is a relationship or influence between these constructs. Ghozali (2016: 10) explained that PLS is an analytical method that is soft modeling because it is not based on the assumption that data must be with a measurement scale, data distribution (distribution free) and a certain number of samples which means the number of samples can be small (under 100 samples) or large samples above 200.

Noor (2015: 144), also emphasized that PLS has its own advantages including data does not have to be normally multivariate distributed (indicators with category scales, ordinals, intervals until ratios can be used in the same model) and sample size does not have to be large. Use of PLS in addition to being able to used to confirm a theory, it can also be used to explain the presence or absence of relationships between latent variables. PLS can analyze at the same time constructs formed with reflexive indicators and formative indicators.

Latent variable indicators formed in PLS-SEM according to Ghozali (2014: 8) can be both reflexive and formative. Reflexive indicators or often referred to as Mode A are indicators that manifest against constructs and are in accordance with classical test theory which assumes that variance in the measurement of the latent variable score is a function of true score plus error. While formative indicators or often referred to as Mode B are indicators that define characteristics or explain constructs.

Constructs with formative indicators assume that each indicator defines or describes the characteristics of its construct domain. Ferdinand (2014: 60) explains the criteria for formative indicators as follows:
1. Indicators define construct characteristics
2. Changes in indicators result in changes in constructs
3. Indicators are not interchangeable
4. Eliminating one indicator will change the meaning of the construct

PLS model evaluation is carried out by assessing the outer model and inner model. Evaluation of the measurement model or outer model is carried out to assess the validity and reliability of the model. Outer models with reflexive indicators are evaluated through convergent and discriminant validity of latent construct-forming indicators and composite reliability as well as cronbach alpha for their indicator blocks. The following rule of thumb evaluation of the outer model is presented in table 4.1 as follows:
While the evaluation of structural models or inner models in PLS aims to predict relationships between latent variables. The inner model is evaluated by looking at the percentage of variance described by looking at the r-square value for endogenous latent constructs.

**Hypothesis Testing**

In hypothesis testing through Partial Least Square (PLS) using the help of the SmartPLS 3.0 application, it can be seen through the path coefficient, the results of bootstrapping testing with the rule of thumb significance value (two-tailed) t-value above 1.96 (significance level = 5%) in order to be declared significant on the variable.

**RESULT AND DISCUSSION**

**Discussion Of Outer Model Analysis**

Outer model analysis is carried out to ensure that the measurement used is suitable for measurement (valid and realistic). This outer model analysis specifies the relationship between latent variables and indicators, or it can be said that the outer model defines how each indicator relates to its latent variables. In this study the indicators used in constructs are formative indicators. Ghozali (2014: 77) stated that if the construct is formative, the evaluation of the measurement model is carried out by looking at the significance of the outer weight. Ghozali (2014: 58) explained that constructs with formative indicators assume that each indicator defines or explains the characteristics of its construct domain. The direction of the indicator is from indicator to construct. So that construct validity and reliability tests are not needed.

To obtain weight significance must go through a resampling procedure (bootstrapping). The outer weight result through bootstrapping is presented in the picture 1. the following:

<table>
<thead>
<tr>
<th>No.</th>
<th>Validity and Reliability</th>
<th>Rule of Thumb</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Weight Significance</td>
<td>• Greater significance than 1.96 (significance level = 5%)</td>
</tr>
</tbody>
</table>

Source: Ghozali, 2015:76-77
The interpretation of the outer weight output in figure 5.1 is as follows:

1. The indicator (NOPAT-CC) against the EVA (Economic Value Added) construct can be declared valid with the outer weight result showing a t-statistic value of 3.056 (>1.96).

2. The RHS (Average Stock Price) indicator against the HS construct (Stock Price) can be declared valid with the outer weight result showing a t-statistic value of 5.145 (>1.96).

3. The indicator (MVE-BVE) against the MVA (Market Value Added) construct can be declared valid with the outer weight result showing a t-statistic value of 2.180 (>1.96).

4. The indicator (NOPAT-(Mv.t*WACC) against the REVA (Refined Valued Added) construct can be declared valid with the outer weight result showing a t-statistic value of 5.573 (>1.96).

5. The CG (Capital Gain) indicator against the RS (Stock Return) construct can be declared valid with the outer weight result showing a t-statistic value of 3.274 (>1.96).

From the results of the outer weight interpretation above, it can be seen that all formative indicators used can be declared valid with t-statistic values produced more than 1.96 (>1.96)

**Inner Model Analysis**

Inner model analysis is carried out to ensure that the structural model built is really robust (stable) and accurate. Testing of the inner model is done by looking at the $R$-square value which is a goodness-fit test of the model. The output result of the $R$-square calculation is presented in the following figure 2:

![R Square](image)

**Figure 5.2**

Output R-square

Based on figure 5.2, the R-square value for HS (stock price) shows an R-square value of 0.912 and an adjusted R-square of 0.851 while the R-square value for RS (stock return) shows an R-square value of 0.889 and an adjusted R-square amounted to 0.843. This study leads to population research (random taking of a defined population) to get generalizations, so in this study refers to the R-square adjusted value because the purpose of the adjusted R-square is to narrate the R-square in the population.
The interpretation of the inner model on the construct refers to the R-square adjusted result which is 0.851 in HS and 0.843 in RS which can be interpreted that the HS construct variable (stock price) can be explained by the EVA, MVA, and REVA construct variables of 85.1% while the remaining 14.9% is explained by other variables outside the study as well as the RS construct variable (return stock) can be explained by the construct variables EVA, MVA, REVA and HS (stock price) of 84.3% and the remaining 15.7% is explained by other variables outside the study.

Hypothesis Testing

Hypothesis testing using Partial Least Square (PLS) with the help of SmartPLS 3.0 program is done with bootstrapping calculations. This test is carried out to see the significance of the influence between variables by looking at the parameter coefficient and the value of t-statistical significance. To see the value of the parameter coefficient and the value of significance t-statistics with bootstrapping can be seen through the path coefficients report, namely the original sample (O) as the value of the parameter coefficient and T-Statistics (|O/STDEV|) presented in Figure 3 below:

Figure 3. Path Coefficients

Based on the path coefficient output as shown in figure 5.9 above, the interpretation of the results of the output is as follows:

a. The relationship between EVA (Economic Value Added) and HS (Stock Price) is significant with a t-statistic value of 2.172 (>1.96) and the original sample value is positive at 0.560 while the direction of the relationship between EVA (Economic Value Added) and HS (Stock Price) is positive.

b. The relationship between EVA (Economic Value Added) and RS (Stock Return) is significant with a t-statistic value of 2.408 (>1.96) and the original sample value is positive at 0.852, so the direction of the relationship between EVA (Economic Value Added) and RS (Stock Return) is positive.

c. The relationship between HS (Stock Price) and RS (Stock Return) is significant with a t-statistic value of 2.064 (>1.96) and the original sample value is positive at 0.332, so the direction of the relationship between HS (Stock Price) and RS (Stock Return) is negative.

d. The relationship between MVA (Market Value Added) and HS (Stock Price) is significant with a t-statistic value of 1.967 (>1.96) and the original sample value is positive at 0.315, so the direction of the relationship between MVA (Market Value Added) and HS (Stock Price) is positive.

e. The relationship between MVA (Market Value Added) and RS (Stock Return) is significant with a t-statistic value of 2.150 (>1.96) and the original sample value is positive at 0.515, so the direction of the relationship between MVA (Market Value Added) and RS (Stock Return) is positive.

f. The relationship between REVA (Refined Economic Value Added) and HS (Stock Price) is significant with a t-statistic value of 2.015 (>1.96) and the original sample value is positive at 0.427, so the direction of the relationship between REVA (Refined
Economic Value Added) and HS (Stock Price) is positive.

The relationship between REVA (Refined Economic Value Added) and RS (Stock Return) is significant with a t-statistic value of 2.562 (>1.96) and the original sample value is positive at 0.520, so the direction of the relationship between REVA (Refined Economic Value Added) and RS (Stock Return) is positive.

CONCLUSION
As the purpose of this study, the following conclusions can be drawn:

1. Based on the results of testing Partial Least Square Path Modeling (PLS-SEM) proves that the variable Economic Value Added (EVA) has a significant influence with a positive direction on stock prices.
2. Based on the results of testing in Partial Least Square Path Modeling (PLS-SEM) proves that the variable Economic Value Added (EVA) has a significant influence with a positive direction on stock returns.
3. Based on the results of testing Partial Least Square Path Modeling (PLS-SEM) proves that the Market Value Added (MVA) variable has a significant influence with a positive direction on stock prices.
4. Based on the results of testing in Partial Least Square Path Modeling (PLS-SEM) proves that the Market Value Added (MVA) variable has a significant influence with a positive direction on stock returns.
5. Based on test results Partial Least Square Path Modeling (PLS-SEM) proves that the variable Refined Economic Value Added (REVA) has a significant influence in a positive direction on stock prices.
6. Based on the results of testing Partial Least Square Path Modeling (PLS-SEM) proves that the variable Refined Economic Value Added (REVA) has a significant influence with a positive direction on stock returns.
7. Based on the results of testing by Partial Least Square Path Modeling (PLS-SEM) proves that stock price variables have a significant influence with a positive direction on stock returns.
REFERENCES


Bakar, Abu. 2012. Analisis Perbandingan Kinerja Perusahaan Telekomunikasi dengan Menggunakan EVA, REVA, FVA, dan MVA.Jurnal Rekayasa LPPM Itenas Vol.10 No.4. Institut Teknologi Nasional


