THE EFFECT OF MACROECONOMIC VARIABLES AND THE STOCK MARKET ON THE FINANCIAL PERFORMANCE OF COMPANIES TWO YEARS AFTER THE MERGER AND ACQUISITION

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Abstract

This research is to identify the company's financial performance after two years of merging and acquisition. This research analyzes the effect of Money Supply, Inflation and Foreign Exchange) and the stock trading volume, earning per share, and price to earning ratio) on yield and capital gain. The population is companies that did mergers & acquisitions in 2018. This research data is monthly data throughout 2018 and 2020. Data analysis techniques include regression of panel data using views 10, and Chow, Lagrange Multiplier, and Hausman test). The results are there is an increase in the stock market performance and variables of capital gain, yield, trade volume activity earnings per share, except for price to earning ratio. Foreign exchange, trading volume, EPS, and PER have a positive and significant impact on capital gains and yields. Meanwhile, money supply and inflation insignificantly positive affect capital gains and yields.

Keywords: acquisition; merger; macroeconomic; stock market; capital gain; yield

Introduction

The phenomenon of mergers and acquisitions transactions is increasingly common among companies, including companies in Indonesia. A merger and acquisition transaction should increase the company's capabilities in a short period of time compared to internal growth or organic growth which usually takes a slower time to produce equivalent growth (Lynch & Lind, 2002).

Many previous studies have examined why many companies undertake mergers and/or acquisitions. (Agnihotri, 2013) examines the determinants of M&A from the perspective of the Indian state. The results of his research show that earnings volatility and business group affiliation are determinants of the occurrence of M&A in companies in India. Research by (Antoniou et al., 2008) shows the variables that drive M&A, namely the results of management studies on market valuations. M&A policy is more driven by bullish market conditions.

Other previous studies looked at the factors that determine the success of the company after conducting (Schraeder & Self, 2003) examines it from the perspective of
organizational culture (organizational culture), organizational change, organizational strategy, and organizational development management as important catalysts for the success of M&A. (Stahl et al., 2013) examines the success of M&A from the aspect of human resources. Jochem T. Hummel and (Hummel & Amiryany, 2015) assessed the performance determinants of the acquiring company as seen from the intensity of research and development (R & D intensity). The two researchers classified the acquired companies into three categories based on the intensity of research and development, namely high-tech companies, medium-tech companies, and low-tech companies. Both researchers view that R & D intensity is a determinant that determines the success of the company’s performance after the acquisition.

More specifically, research by (Kim et al., 2019) finds that macroeconomic factors (overall activity, market value, cost of debt, and inflation) are the determinants of the success of mergers and acquisitions. A number of studies have shown how macroeconomic variables and the stock market can affect company performance, especially financial performance. Financial performance can be based on accounting, such as Return on Equity (ROE), Return on Assets (ROA), and Gross Profit Margin (GPM). Financial performance can also be market-based such as Stock Returns, Earning Yield ratio (EYR), Earning per Share (EPS), and Dividend Yield ratio (DYR).

This research contributes in several ways. First, to fill the gap in the literature of post-merger study in terms of macroeconomic and microeconomic. Second, time horizon of two years is regarded as sufficient benchmark to investigate the post-merger result. Third, this research includes the variables from stock market such as trading volume activity.

Financial performance can also be based on a mixture of accounting and market bases such as Tobin's Q ratio. These studies are shown in Table 1.

| Table 1 | Position of Financial Indicators Before and After Merger |
|---|---|---|---|---|---|
| Variables | 1 Year before Merger (Mean) | 1 Year After Merger (Mean) | 2 years After Merger (Mean) | 3 years after Merger (Mean) | 4 years after Merger (Mean) |
| Current Ratio | 1.9888 | 1.7520 | 2.0188 | 2.1532 | 2.2676 |
| Quick ratio | 1.2304 | 1.2460 | 1.4040 | 1.4972 | 1.5268 |
| Debt to Asset Ratio | 0.6360 | 0.4768 | 0.5380 | 0.4980 | 0.4516 |
| Debt to Equity Ratio | 1.1800 | 1.2384 | 1.5732 | 1.7272 | 0.9784 |
| Inventory Turnover Ratio | 14,9308 | 8,2340 | 9,1312 | 9,8440 | 10,0036 |
| Asset Turnover Ratio | 0.9160 | 0.6820 | 0.6556 | 0.6160 | 0.6796 |
| Return on Total Asset | 0.1128 | 0.0428 | 0.0400 | 0.0408 | 0.0612 |
| Return on Equity | 0.1624 | 0.0616 | 0.0488 | 0.1060 | 0.1016 |
| Net Profit Margin | 0.1968 | 0.1140 | 0.0828 | 0.1648 | 1.1640 |
| Operating Profit Margin | 0.2296 | 0.1420 | 0.1016 | 0.1864 | 0.2016 |
Research Methods

The study units are companies that have merged or acquired in 2018 and have gone public or are listed on the IDX. This research used the database from Business Competition Supervisory Commission (KPPU) (https://kpu.go.id/belief.merge r.2018/) in year 2018. Based on this criterion, then 17 business entities can be identified as the population in this study.

This study used quantitative method using panel data from the five years data including the financial report and variables. The quantitative will use regression to test the hypothesis. For regression it will follow the rules of thumb of classical assumption. The study will test the sensitivity using Chow test, Lagrange Multiplier test and Hausman test to identify the fixed or random effect model.

Results and Discussions

The variables of this study include the independent variable and the dependent variable. The first independent construct in this study is Macroeconomics (X1) with research indicators consisting of Money Supply (X11), Inflation (X12, and Exchange Rates (X13). The second independent variable is the Stock Market (X2) which consists of Trading Volume indicators Stocks (X21), EPS (X22), and PER (X23). The dependent variable of this study is Financial Performance (Y) with Yield (Y1) and Capital Gain (Y2) indicators.

The description of this research variable will be presented with four kinds of data, namely (i) a description of the overall data variables (2018-2020), (ii) a description of the variables before the M & (2018) occurs, (iii) a description of the variables after one year of M & A (2019), and (iv) a description of the variables after two years of M&A (2020). The presentation of these four types of data can be compared so that a better picture of the company's development can be obtained from before conducting the M & A (2018), one year after the M & A (2019), two years after the M & A (2020) according to the research title, and overall performance for three years (2018-2020).

1. Test the hypothesis with t test

Statistical tests basically show how far the influence of one explanatory/independent variable individually in explaining the variation of the dependent variable. Null hypothesis (H0): the parameter under test is equal to zero. Alternative hypothesis (Ha): the parameters tested are not equal to zero (Ghozali, 2012). Decision making is carried out as follows (Ghozali, 2012): Comparing the calculated t value with the t value according to the t table. If the value of t count is greater than t table, then Ho and are rejected and Ha (alternative hypothesis) is accepted. Vice versa.

Based on Table 4.26 it appears that, statistically, the t-count results for each independent variable (EPS, Exchange Rate, Inflation, Money Supply, PER, Trading Volume) on the dependent variable Financial Performance with the Yield proxy (Y).

a. Hypothesis testing of the effect of Macroeconomic variables (X1) on the dependent variable of Financial Performance with the Yield (Y) proxy with
The Effect of Macroeconomic Variables and The Stock Market on The Financial Performance of Companies Two Years After The Merger and Acquisition

1) Influence based on the Money Supply indicator (X11)

The value of the coefficient of the effect of money supply on yield is 0.080109 (8.01%). Means that Money Supply has a positive effect on Yield with a standardized coefficient of 0.080109 (8.01%). It means that an increase in Money Supply by 1 (one) unit will increase the Yield by 0.080109; or an increase in Money Supply by 100% will increase Yield by 8.01%. The remaining influence (100%-8.01%= 91.99%) on Yield can be explained by other variables other than Money Supply.

The t-statistical test is shown in Table 4.26 that the magnitude of the t-count regression of Money Supply (X1) on Financial Performance (Yield proxy) (Y) is t=0.842622, p-value= 0.3967. This means that the value of tcount (0.842622) < ttable (1.97208), H0 is accepted and H1 is rejected. In addition, the p-value is 0.3967, which means > 0.05. This means that the Money Supply (X11) has a positive but not significant effect on Yield (Y).

2) Influence based on Inflation indicator (X12)

The value of the coefficient of the effect of inflation on yield is 0.094543 (9.45 %). Means that inflation has a positive effect on Yield with a standardized coefficient of 0.094543 (9.45%). It means that 1 (one) unit increase in Inflation will increase Yield 0.094543; or an increase in Inflation by 100% will increase Yield by 9.45%. The remaining effect (100%-9.45%=90.55%) on Yield can be explained by other variables other than inflation.

The t-statistical test is shown in Table 4.25 that the magnitude of the t-count regression of Inflation (X2) on Financial Performance (Yield proxy) (Y) is t=1.797774, p-value= 0.4153. This means that the value of tcount (1.797774) < ttable (1.97208), H0 is accepted and H1 is rejected. In addition, the p-value is 0.4153, which means > 0.05. This means that inflation (X12) has a positive but not significant effect on Yield (Y).

3) Influence based on the Exchange Rate indicator (X13)

The coefficient of the effect of the Exchange Rate on Yield is 0.203247 (20.32 %). It means that the exchange rate has a positive effect on yield with a standardized coefficient of 0.203247 (20.32 %). It means that an increase in the Exchange Rate of 1 (one) unit will increase the Yield 0.203247 (20.32 %); or an increase in the Exchange Rate by 100% will increase the Yield by 20.32%. The remaining influence (100%-20.32%=79.68%) on Yield can be explained by other variables outside the Exchange Rate variable.

The t-statistical test is shown in Table 4.25 that the magnitude of the t-count regression of Exchange Rate (X2) on Financial Performance (Yield proxy) (Y) is t=3.987147, p-value= 0.2521. This means that the value of tcount (3.987147) > ttable (1.97208), H0 is accepted and H1 is rejected. In addition, the p-value is 0.2521 which means <0.05 This means that the Exchange Rate (X13) has a positive and significant effect on Yield (Y).
b. Testing the hypothesis of the influence of the Stock Market variable (X2) on the dependent variable Financial Performance with the Yield (Y) proxy

1) Influence based on Trading Volume indicator (X21)

The coefficient value of the effect of Trading Volume on Yield is 0.146710 (14.67%). It means that Trading Volume has a positive effect on Yield with a standardized coefficient of 0.146710 (14.67%). Means an increase in Trading Volume of 1 (one) unit will increase Yield 0.146710 (14.67%); or a 100% increase in Trading Volume will increase Yield by 14.67%. The remaining influence (100%-14.67% = 85.37%) on Yield can be explained by other variables other than the Trading Volume variable.

The t-statistical test is shown in Table 4.25 that the magnitude of the t-count regression of Trading Volume (X2) on Financial Performance (Yield proxy) (Y) is t=3.750363, p-value=0.1002. This means that the value of tcount (3.750363) > ttable (1.97208), H0 is accepted and H1 is rejected. In addition, the p-value is 0.1002 which means <0.05. This means that Trading Volume (X21) has a positive and significant effect on Yield (Y).

2) Influence based on Earning per Share (EPS) indicator (X22)

The coefficient of the effect of Earning per Share (EPS) on Yield is 0.11798 (20.17%). It means that Earning per Share (EPS) has a positive effect on Yield with a standardized coefficient of 0.11798 (20.17%). It means that an increase in Earning per Share (EPS) of 1 (one) unit will increase Yield 0.11798 (20.17%); or increase in Earning per Share (EPS) by 100% will increase Yield by 20.17%. The remaining influence (100%-20.17% = 79.83%) on Yield can be explained by other variables outside the Earning per Share (EPS) variable.

The t-statistical test is shown in Table 4.25 that the magnitude of t-count regression Earning per Share (EPS) (X2) on Financial Performance (Yield proxy) (Y) is t=2.986337, p-value=0.0178. This means that the value of tcount (2.986337) < ttable (1.97208), H0 is accepted and H1 is rejected. In addition, the p-value is 0.0178 which means <0.05. This means that Earning per Share (EPS) (X22) has a positive and significant effect on Yield (Y).

3) Effect based on Price Earning Ratio (PER) (X23) indicator

The coefficient value of the effect of Price Earning Ratio (PER) on Yield is 0.102816 (10.28%). It means that Price Earning Ratio (PER) has a positive effect on Yield with a standardized coefficient of 0.102816 (10.28%). It means that an increase in Price Earning Ratio (PER) of 1 (one) unit will increase Yield .102816 (10.28%); or an increase in Price Earning Ratio (PER) by 100% will increase Yield by 10.28%. The remaining influence (100% -10.28% = 89.72%) on Yield can be explained by other variables outside the Price Earning Ratio (PER) variable.
The effect of Macroeconomic Variables and The Stock Market on The Financial Performance of Companies Two Years After The Merger and Acquisition

The t-statistical test is shown in Table 4.25 that the magnitude of t-count regression of Price Earning Ratio (PER) (X2) on Financial Performance (Yield proxy) (Y) is t=2.166173, p-value= 0.0500. This means that the value of tcount (2.166173) > ttable (1.97208), H0 is accepted and H1 is rejected. In addition, the p-value is 0.0500 which means <0.05. This means that the Price Earning Ratio (PER) (X23) (X22) has a positive and significant effect on Yield (Y).

The results showed that there was an increase in financial performance, especially stock market performance, in 17 companies that went public in 2020 after they carried out a merger/acquisition (M&A) two years earlier (2018). The increase in the performance of these shares is as follows: (a) The average capital gain in 2018 is Rp. 0.613281/share. The average yield in 2018 was IDR 1.439011/share, increasing in 2020 to IDR 2.302451/share. (b) Stock trading volume (trade volume activity/ TVA), the average TVA in 2018 was 665,224,3923 lots (1 lot=500 shares), increased in 2020 to 1,209,726,338 lots. (c). Earning per share (EPS), the average EPS in 2008 was 111,.0441 %; increased in 2020 to 195.3034 %. The decrease only occurred in the Price earning ratio (PER), where. the average PER in 2018 was 53,46448%. decreased in 2020 to 45,58041%.

Externally, M & A companies, in this case macroeconomic variables, with three proxies (money supply, inflation, exchange rates), also experienced changes for three years (2018-2020). The average money supply per month (monthly) is IDR 3,861,538,333 billion (2018), decreasing to an average per month (monthly) of IDR 446,660,545 billion (2020). The monthly IDR exchange rate against USD increased from IDR 13,398, 17 in 2018 to IDR 14,625.25 in 2020. The average monthly inflation in 2018 was 3.1975 also increased to 2,035833% in 2020. Based on the results of the study, the three The macroeconomic variable has a positive but not significant effect on stock returns. The results of this study support the results of previous studies that exchange rates, inflation, and exchange rates have a positive effect on stock returns (de Sousa et al., 2018).

The results of this study support the results of research by (Murphy et al., 2010), (Stahl et al., 2013), (Toyoshima et al., 2014), (Hummel & Amiryany, 2015) and (Kim et al., 2019). However, the output of this study contradicts the output of the study by (Romero et al., 2014) who conducted research on the financial performance of manufacturing companies after they had mergers and acquisitions. The finding of this study is that the financial performance of companies that acquire manufacturing companies does not significantly increase after the merger process. Liquidity, profitability, and capital position did not significantly increase, even the company's efficiency worsened in the period after the merger.

The difference in the results of these studies can be caused by many things. Among them is the use of research indicators. Research by (Romero et al., 2014) uses indicators of liquidity, profitability, and capital position. While this study uses macroeconomic indicators and the stock market. In addition, there are differences
regarding the object of research. The object of research by (Romero et al., 2014) is a manufacturing company, while this study chooses the object of research in the company sector in general.

This study adds to the wealth of macroeconomic impacts on stock market performance. For example, previous studies have proven the positive effect of inflation on returns. (Ouma & Muriu, 2014) and share index (Laichena & Obwogi, 2015) This study proves the positive effect of inflation on capital gains and yields in companies that have conducted M&A two years before. This study supports the results of research (Pathirawasam, 2011) (Tehranchian, A. M., Behravesh, M., & Hadinia, 2014) which proves that stock trading volume is proven to affect stock returns.

This research also creates a research gap. For example, research (Ruhomaun et al., 2019) proves that exchange rates have a negative effect on firm performance. (Ouma & Muriu, 2014) proves the negative effect of Exchange Rate on Return. While this study proves otherwise that the exchange rate has a positive effect on returns (capital gains and yields).

Theoretically, the results of this study support the opinion of (Agrawal et al., 2012), (Ivanov et al., 2014), and (Vyas et al., 2012) which basically states that the motivation of companies to conduct M&A is motivated by the desire to obtain financial synergies, market power, gain access to a distribution channel, or to enter a new geographic access. The results of this study indicate that the financial performance of the 17 companies increased after two years of conducting M&A (2020).

Theoretically there are many indicators that show the company's development after conducting M&A. For example, (Ivanov et al., 2014) and (Vyas et al., 2012) that through M&A the acquirer can gain direct access to the technology, distribution channel, and market share of the company's target. The technology transfer factor (know-how) is a strong reason for companies to conduct M&A, so this factor is one of the measuring tools for the success/failure of the company after conducting M&A. Meanwhile, this study measures the success/failure of the M&A from a stock market perspective.

Considering that this research intends to measure the success/failure of the company conducting the M&A from the stock market perspective, the proxy used is stock return. The basis for measuring financial performance in this study is the stock market, namely stock returns. Stock returns are chosen as a proxy for financial performance, because this proxy is proven to be influenced by macroeconomic variables and the stock market. Stock return is the profit obtained from investment. Stock return is the level of profit obtained by investors or a stock investment that they do. Stock returns are divided into realized returns and expected returns. This study chooses stock returns in terms of stock realization (relized return), with two indicators, namely yield and capital gain. Yield is the percentage of periodic cash receipts to the investment price in a certain investment period. Yield = (dividend per share/stock price) x100%. Meanwhile, Capital gain/loss is the difference between the current investment price and the past investment price. Capital gain/loss: (Close price (Pt) – close price (Pt-1)/ Pt-1) x 100%. 

Yield = (dividend per share/stock price) x100%
The Effect of Macroeconomic Variables and The Stock Market on The Financial Performance of Companies Two Years After The Merger and Acquisition

Macroeconomic analysis. The money supply (supply of money) affects stock returns positively but not significantly. Money supply (money supply) is the monetary obligation of a monetary system to the public, in Indonesia the money consists of the amount of currency outside the monetary system and demand deposits on behalf of parties who are not members of the monetary system (bi.go.id/ Dictionary .aspx?id=U). The results of this study prove that the participants in the stock market are also people who pay attention to the movement of money circulating in the community.

Inflation is proven to affect stock returns but not significantly. The results of this study prove that the participants in the stock market are also people who pay attention to the movement of inflation in society. Inflation in this study is monthly inflation published by Bank Indonesia (BI) as measured by the Consumer Price Index (CPI).

Likewise exchange rates. The exchange rate is one of three macroeconomic variables that positively and significantly affect stock returns. This is considering the exchange rate of the rupiah (IDR) against the US dollar (USD) increased from Rp. 13,398, 17 in 2018 to Rp. 14,625.25 in 2020. The fluctuations in the exchange rate of the IDR against the USD are factors that also influence investors to transact shares in the stock market, thus affecting the volume of stock trading and stock prices. Changes in stock prices will determine stock returns.

Stock market analysis. Stock trading volume variable (trading volume activity, TVA) is proven to have a positive and significant influence on stock returns. TVA is the number of shares traded with the number of shares outstanding. This TVA indicator is useful for measuring whether individual investors know the information issued by the company and use it in buying or selling shares. The results of this study which prove that TVA has a positive and significant effect indicate that investors know about the dynamics of TVA in Tbk companies that carry out M&A.

The results of the study prove that EPS has a positive and significant effect on stock returns. earning per share (EPS) is a ratio that shows how much the ability per share to generate profits or is a ratio that describes the amount of rupiah earned for each share of common stock. will be earnings per share.

Price Earning Ratio (PER) is proven to positively and significantly affect Stock returns. PER is the ratio of the company's share price to the company's earnings per share. PER is the share price divided by EPS (Rahmadewi & Abundanti, 2018). EPS and PER are closely related statistically. EPS is proven to affect stock returns, in this study it is proven that EPS and PER are directly proportional in influencing stock returns.

Conclusion

This study examines the effect of six independent variables (EPS, Exchange Rate, Inflation, Money Supply, PER, Trading Volume) on one dependent variable (financial performance with stock return proxies, with capital gain indicators, and yields) in 17 companies listed on the IDX. in 2020, after the 17 companies conducted a merger/acquisition (M&A) two years earlier (2018). The study also compared the stock
market performance of 17 companies simultaneously between 2018 (when the M&A took place) and 2020 (after two years of M&A). The following are the results of the study: (1.) The development of the 17 companies after two years of conducting M&A can be viewed from the stock market variables/indicators as follows: a.) Stock return variables (stock return), with indicators Yield (Y1) and Capital Gain (Y2). The average capital gain in 2018 was IDR 0.613281/share, while the average capital gain in 2020 was IDR 2.50. The average yield in 2018 was IDR 1.439011/share, increasing in 2020 to IDR 2.302451/share. 2.) Stock trading volume (trade volume activity/ TVA). The average TVA in 2018 was 665,224,3923 lots (1 lot=500 shares), increased in 2020 to 1,209,726, 338 lots. 3.) EPS. The average EPS in 2008 was 111,.0441 %; increased in 2020 to 195.3034 %. 4.) PER. The average PER in 2018 was 53,46448%. decreased in 2020 to 45.58041%. (2.) In relation to the effect of six independent variables (EPS, Exchange Rate, Inflation, Money Supply, PER, Trading Volume) on one dependent variable (financial performance with stock return proxy, which is divided into two indicators: capital gains, and yields) in 17 company two years after the M&A (2020) it can be concluded that: a.) Money supply affects capital gain positively but not significantly, with a coefficient value of 0.0800308 (8.03%). Money supply affects yield positively but not significantly, with a coefficient value of 0.080109 (8.01%). It means that the effect of money supply on yield is greater than the effect of money supply on capital gains. The results of this study prove hypothesis 1a which reads that the money supply has an effect on stock returns. b.) Inflation affects capital gains positively but not significantly, with a coefficient value of 0.069325 (6.93 %). Inflation affects yields positively but not significantly, with a coefficient value of 0.094543 (9.45 %). It means that the effect of inflation on yield is greater than the effect of inflation on capital gains. The results of this study prove hypothesis 2a which reads that inflation affects stock returns. c.) Exchange rate affects capital gains positively and significantly, with a coefficient value of 0.206036 (20.60 %). Exchange rate affects yield positively and significantly, with a coefficient value of 0.203247 (20.32 %). It means that the effect of the exchange rate on capital gains is greater than the effect of the exchange rate on the yield. The results of this study prove hypothesis 2b which reads that the exchange rate has an effect on stock returns. d.) Trading Volume affects capital gains positively and significantly, with a coefficient value of 0.181019 (18.10%). Trading Volume affects yield positively and significantly, with a coefficient value of 0.146710 (14.67 %). It means that the effect of Trading Volume on capital gain is greater than the effect of Trading Volume on yield. The results of this study prove hypothesis 2a which reads that trading volume has an effect on stock returns. e.) Earning per share affects capital gain positively and significantly, with a coefficient value of 0.206036 (20.60%). Earning per share affects yield positively and significantly, with a coefficient value of 0.11798 (20.17%). This means that the effect of Earning per Share on capital gains is greater than the effect of Earning per Share on yield. The results of this study prove hypothesis 2b which reads Earning Per Share (EPS) has an effect on stock returns. f.) Price Earning Ratio (PER) affects capital gain positively and significantly, with a coefficient value of
The Effect of Macroeconomic Variables and The Stock Market on The Financial Performance of Companies Two Years After The Merger and Acquisition

0.127826 (12.78%). Earning per share affects yield positively and significantly, with a coefficient value of 0.102816 (10.28%). It means that the effect of Price Earning Ratio on capital gain is greater than the effect of Price Earning Ratio on yield. The results of this study prove hypothesis 2c which reads Price Earning Ratio (PER) has an effect on stock returns.
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The Effect of Macroeconomic Variables and The Stock Market on The Financial Performance of Companies Two Years After The Merger and Acquisition


