

# The Determinant of Stock Price at the Banking Sub-sector Company in Indonesia Stock Exchange

Kukuh Hadi Prayogo and Etty Puji Lestari

**Abstract**—Before investing their fund to buy a stock or share, an investor must make analysis toward the prediction of investment risks as well as the projection of earned profit and the stock price is one of indicators that can be used on this analysis. The aim of this research is to analyze the influence of stock price seen from Return on Assets (ROA), Earning per Share (EPS) dan Price to Earning Ratio (PER) which take places at the banking sub sector company on the Stock Exchange of Indonesia. This is explanatory research that describes causal relations between one variable and another variable by using hypothesis and quantitative approach. Data analysis technique which is used on this research is panel data regression. The finding of this research is that ROA has negative influence yet insignificant toward the stock price. This condition is rarely seen but possible to happen since the condition of Stock Exchange of Indonesia is in medium market or emerging market, a condition in which government gives many interventions. Due to the intervention, many rules on the Stock Exchange are not applied well.

**Index Terms**—Return on assets, earning per share, price to earning ratio, stock price, panel data regression.

## I. INTRODUCTION

Banking is the main sector that controls economic growth in Indonesia because banking system is one of the drivers of the economy of a country. In developing a business, financial capital is one of important capitals and the existence of bank provides accessibility to financial capital. Despite the existence of capital market, banks can reach all levels of society in term of acquisition of credit.

The development of banking in Indonesia also has taken place rapidly. A wide range of investment instruments has been offered by banks to the public. Currently, there are 118 commercial banks and 1,636 rural banks, established in Indonesia [1]. Some banks have extended their business in the stock market through Initial Public Offering (IPO) and switched to public companies. Investors generally seek forms of favorable investment and measurable risks.

Besides performing its main functions as a distributor of credit, money storage, and place of traffic of money circulation, bank also becomes a place of investment in the stock market. This allows other investors to invest funds by buying stocks to earn returns in form of dividends, positive stock quotes, interest payments and so on. The main objective to invest is to obtain return on its investment, in the form of dividend and capital gain.

From 2012 to 2016, there were several events that affected

the stock price, especially banking companies. During that time, there were several significant events in the economy, for instance, the rise of world commodity price such as oil and coal, China's booming economic growth and wars in the Middle East. Those events give a great impact to banking system. The banking sub-sector, which includes the financial sector, took in the third number in the past year of all sectors. The rating is illustrated in Fig. 1.

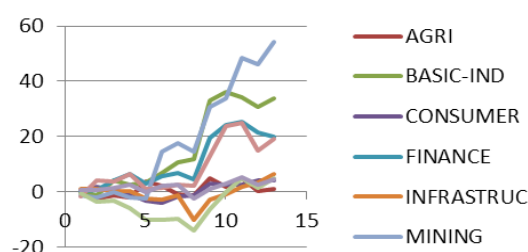


Fig. 1. Performance of every economic sectors.

Fig. 1 illustrates the percentage ratio of stock price growth among stock sectors on the Stock Exchange of Indonesia last year. A line above zero means the stock sector's performance is profitable, while the line below zero means the stock sector's performance suffer financial loss. The most profitable stock sector in the past year is shown by the highest floating positive line and it appears that the financial sector ranks third in terms of stock performance.

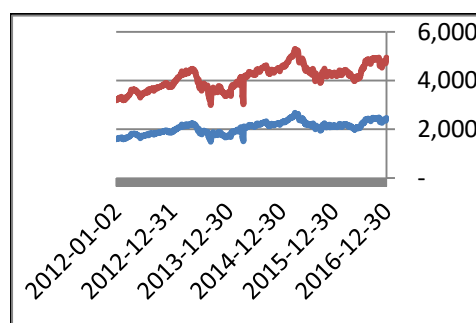


Fig. 2. The average opening and closing prices.

Fig. 2 shows the average opening and closing prices of banking sub-sector stocks from 2012 to 2016 and stock prices experience a rising trend over the last five years. BRI, Bank Mandiri, BCA and BNI are among the six largest companies in Indonesia, surveyed by Forbes magazine in 2016 in terms of achieving corporate profits. This indicates that the banking stock has a large potential and relatively promising, seen from the company's performance. Supported by the government's strong protection of the banking sector, this sector is performing well, stable enough and consistently posting profits. This condition makes the stocks or obligations on the banking sector become safe and profitable investment land. Though on the other hand, low enough risk

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would provide a lower investment returns than high-risk investments sector.

While it is relatively safe and profitable, before buying stocks, an investor must perform an analysis supported by accurate data to predict the investment risk and project earned profit. Investors can choose which companies have the lowest risk but has the greatest benefits or the most measurable and predictable risks and benefits. Profitability (earnings after tax) and asset are important variables as the basis of consideration for the managers of companies in order to determine dividend policy. Increased profitability achieved by the company will increase investor expectations to get higher dividend income as well [2].

The analysis of fundamental factors is based on the company's financial statements that can be analyzed through the analysis of financial ratios and other measures such as cash flow to measure the company's financial performance [3]. There are several ratios that can be used to measure the company's financial performance such as profitability ratio measured by Return On Asset (ROA) and investment ratio measured by Earning Per Share (EPR) and Price Earnings Ratio (PER). This article will analyze the performance of stock prices viewed from ROA, ROE and PER in the banking sub-sector on the Stock Exchange of Indonesia by using panel data regression.

## II. LITERATURE REVIEW

ROA describes the company's financial performance in generating net income from assets used for the company's operations. ROA can create appreciation and depreciation of

stock price, therefore it will also impact on shareholders of the company. Increasing ROA describes the better performance of the company and shareholders will get some profit from the increased dividends received, increasing prices and stock returns.

One indicator that can be taken into consideration for knowing the banking ratio to generate profit is ROA. Meanwhile in this case, the activity of banking loan distribution, ROA affects the loan distribution because ROA is a ratio that is directed to determine the ability of companies in generating profit of the past as a projection or companies' benchmark to generate profits in the future. According to [4], ROA measures the ability of a company to generate profit by using the total assets (property) owned by the company after adjusting to the costs to fund those assets. ROA affects the loan distribution due to the ability to generate profits in the higher banking system then the funds provided for loan distribution will be greater due to rise of the assets. Furthermore, the demand for loans proposed by banks will be able to meet these needs due to the ability of banks to generate better profits.

In Table I, the ROA of most banking companies is under the ROA of the industry, it raises the curiosity whether the ROA is in line with the financial statements of each company and to what extent of its influence on the stock price of the company. Moreover, in 2015 the government provided incentives in the form of tax deductions for the asset revaluation implementation. If the value of a company's net assets rises, then its stock valuation automatically from the side of PBV will decrease or becomes cheaper, so its stocks have a reason to rise fundamentally.

TABLE I: THE COMPARISON OF BANK RATIO AND AVERAGE INDUSTRY

CODE	PER	EPS	ROA	PER INDUSTRY	EPS INDUSTRY	ROA INDUSTRY
AGRO	136,15	7,06	1,06%	14,8	684,22	2,67%
BABP	113,02	0,61	-0,56%	14,8	684,22	2,67%
BACA	10,63	14,19	0,89%	14,8	684,22	2,67%
BBCA	19,39	730,83	3,06%	14,8	684,22	2,67%
BBKP	5,22	105,7	1,21%	14,8	684,22	2,67%
BBNI	10,95	486,83	2,31%	14,8	684,22	2,67%
BBNP	24,76	98,79	1,03%	14,8	684,22	2,67%
BBRI	11,27	1071,51	3,22%	14,8	684,22	2,67%
BBTN	8,57	247,33	1,20%	14,8	684,22	2,67%
BDMN	17,13	278,52	1,84%	14,8	684,22	2,67%
BEKS	-	-8,82	-1,28%	14,8	684,22	2,67%
BJBR	19,07	119,06	1,61%	14,8	684,22	2,67%
BKSW	-	-74,26	-0,52%	14,8	684,22	2,67%
BMRI	19,27	591,71	2,32%	14,8	684,22	2,67%
BNBA	8,34	24,65	1,31%	14,8	684,22	2,67%
BNGA	12,43	82,83	1,23%	14,8	684,22	2,67%
BNII	12,03	28,27	0,96%	14,8	684,22	2,67%
BNLI	-	-368,08	-0,19%	14,8	684,22	2,67%
BSIM	37,21	13,1	1,00%	14,8	684,22	2,67%
BSWD	-	-43,49	1,43%	14,8	684,22	2,67%
BTPN	8,74	303,84	2,72%	14,8	684,22	2,67%
BVIC	-	13,18	1,02%	14,8	684,22	2,67%
INPC	22,16	5,45	0,61%	14,8	684,22	2,67%
MAYA	14,13	152,8	1,60%	14,8	684,22	2,67%
MCOR	45,36	6,33	0,87%	14,8	684,22	2,67%
MEGA	15,39	166,29	1,41%	14,8	684,22	2,67%
NISP	11,6	156,01	1,34%	14,8	684,22	2,67%
PNNB	9,01	99,86	1,37%	14,8	684,22	2,67%
SDRA	17,03	61,08	1,61%	14,8	684,22	2,67%

The increase of net asset value also causes the company's debt to equity ratio to fall, therefore it makes possible for the company to apply for a larger loan to the bank for expansion

purposes, and for the bank, it means that its loan distribution will grow, as well as its revenue and net profit. In conclusion from the various backgrounds above, it is necessary for the

ROA variable to be one of the variables studied in this research and to find its research gap.

Previous research, [5] support the theory that ROA has a significant effect on stock prices, on the contrary research by [6], [7] state that ROA has no significant effect on the stock price. From the report of Forbes magazine, it appears that BRI, Bank Mandiri, BCA and BNI have very large assets (the amount of the asset for each bank is \$ 63.7B, \$ 66B, \$ 43.1B, \$ 38.4B), but lower than their market value (the amount of each bank is \$ 20.4, \$ 17.6B, \$ 24.5B, \$ 6.9B). It is interesting to know the cause and effect on stock prices as a whole relation to ROA.

Furthermore, Earning per Share (EPS) is the earnings per stock sheet, which shows the ability of the company in generating profit per stock. PER is one of the indicators for the simplest evaluation tool of a stock. If EPS is high then theoretically the investor will judge that the issuer has a good performance, so the profit per stock sheet generated by the company is also quite good. The positive effect of EPS on stock prices has shown that EPS is an important component for investors to consider. Profit greatly affects investors in assessing a company whether the company is worth as a profitable investment tool or not. Profit analysis from the angle of the investor or the owner of the company is intended to the profit per stock because this number provides information about how much the profit earned by ordinary shareholders for each stock sheet they own.

Related to the EPS, there is a stock dilution phenomenon, namely changes in EPS due to the addition of stock circulation. Information in the media often does not specify whether the status of the released EPS is regular EPS or diluted EPS. Inaccurate investors can get into the imagination of diluted EPS and take inappropriate action and suffer a financial loss. EPS can jump so high if we do not consider any new stock.

EPS banking companies are mostly lower than the average industry. It may have been caused by the imbalance of banking company profit achievement, where there are companies whose income is large while the other is small. Moreover, what is the relation with the stock price of the company? The research that supports EPS has a significant effect on stock prices is conducted by [5] and [7] while the opposite research that EPS has no effect on stock prices is done by [6].

Meanwhile, Price Earnings Ratio (PER) indicates the amount of fund issued by investor to get the profit of company. Companies that have higher growth in theory, they usually have a large PER, and vice versa. In investing, investors pay attention to PER to be one of the considerations in taking investment decisions, wherever PER increasing, investors expect a higher company's growth [8].

Price Earnings Ratio (PER) is a market ratio that measures a company's stock performance against a company's performance which is reflected by its EPS. The greater PER of a stock, the more expensive is the stock to the net income per stock. In applying PER, there is a phenomenon called trickery or imagination PER. This happens because of an indication of a company's efforts to create a fake growth in a certain way, for instance by selling assets and then put it into the income statement, consequently the earnings of the company is rising but the PER is down. When the PER is

down, the company expects investors to buy the shares while in fact their assets are reduced. Therefore, the use of PER related to the needs of stock investment, investors should have to see the balance sheet as well as ensure that the profit and assets are not even down but up. Additionally, there are several steps that must take into consideration such as the issue of new stocks, bonus shares, stock splits and also the reverse split by companies to avoid being trapped in PER imagination.

In Table I the PER variable shows that the majority surpass the industrial PER. The higher PER in theory causes the higher stock prices and vice versa. The research that supports PER has a significant effect on stock price is conducted by [7], while [5] and [6] studies resulted in reverse research that PER has no significant effect on stock prices. Based on those results of previous research which is still varied, therefore this research tries to analyze the influence of Return on Asset, Earning per Share and Price Earnings Ratio to stock price at Banking sub sector company on Stock Exchange of Indonesia.

### III. RESEARCH METHODS

TABLE II: SAMPLE BANKS

NO	CODE	EMITEN	IPO
1	AGRO	Bank Rakyat Indonesia Agro Niaga Tbk	08 August 2003
2	BABP	Bank MNC Internasional Tbk	15 July 2002
3	BACA	Bank Capital Indonesia Tbk	08-Oct-2007
4	BBCA	Bank Central Asia Tbk	31-May-2000
5	BBKP	Bank Bukopin Tbk	10 July 2006
6	BBNI	Bank Negara Indonesia (Persero)Tbk	25-Nov-1996
7	BBNP	Bank Nusantara Parahyangan Tbk	10 January 2001
8	BBRI	Bank Rakyat Indonesia (Persero)Tbk	10-Nov-2003
9	BBTN	Bank Tabungan Negara (Persero) Tbk	17-Dec-2009
10	BDMN	Bank Danamon Indonesia Tbk	6-Dec-1989
11	BEKS	Bank Pundi Indonesia Tbk	13 July 2001
12	BJBR	Bank Jabar Banten Tbk	08 July 2010
13	BKSW	Bank QNB Indonesia Tbk	21-Nov-2002
14	BMRI	Bank Mandiri (Persero) Tbk	14 July 2003
15	BNBA	Bank Bumi Arta Tbk	31-Dec-1999
16	BNGA	Bank CIMB Niaga Tbk	29-Nov-1989
17	BNII	Bank Maybank Indonesia Tbk	21-Nov-1989
18	BNLI	Bank Permata Tbk	15 January 1990
19	BSIM	Bank Sinar Mas Tbk	13-Dec-2010
20	BSWD	Bank of India Indonesia Tbk	01-May-2002
21	BTPN	Bank Tabungan Pensiunan Nasional Tbk	12 March 2008
22	BVIC	Bank Victoria Internasional Tbk	30 June 1999
23	INPC	Bank Artha Graha Internasional Tbk	29-Aug-1990
24	MA YA	Bank Mayapada Internasional Tbk	29-Aug-1997
25	MCOR	Bank Windu Kentjana Internasional Tbk	03 July 2007
26	MEGA	Bank Mega Tbk	17 April 2000
27	NISP	Bank OCBC NISP Tbk	20-Oct-1994
28	PNBN	Bank Pan Indonesia Tbk	29-Dec-1982
29	SDRA	Bank Woori Saudara Indonesia 1906 Tbk	15-Dec-2006

Source: www.sahamok.com

The sample in this research is the banking subsector company listed in the Stock Exchange of Indonesia with the complete publication of financial report in 2012 - 2016. The sampling technique used in this research is purposive random sampling, it means that the determination of the sample based on certain criteria that have been determined. Determination of sampling criteria required to avoid the occurrence of errors in the determination of research samples, which will further affect the results of the analysis.

The criteria selected in the sample determination are:

- 1) Banking Companies registered on the Jakarta Stock Exchange, no later than 1989 and are still registered from 2012 to 2016.
- 2) Issuer who has complete financial statements per semester during the research period (2012 to 2016).
- 3) Issuers that have complete stock price data during the study period.

According to the conditions above, the researcher gets 29 banks as the samples which meet the criteria, the samples are in Table II.

There are four variables in this study, consisting of one dependent variable and three independent variables. There is one dependent variable in this research namely daily closing stock price of issuer emitter sample. Three independent variables in this research are:

- 1) Return on Assets (ROA), is a ratio that shows the return on assets company. This ratio is formulated as follows:

$$ROA = \frac{NET\ PROFIT}{TOTAL\ OF\ ASSETS}$$

- 2) Earnings per Share (EPS), is the ratio of income earned per one stock. This ratio is formulated as follows:

$$EPS = \frac{NET\ PROFIT}{TOTAL\ OF\ CIRCULATED\ STOCKS}$$

- 3) Price Earnings Ratio (PER), is a ratio that shows how much investors want to pay per IDR of profits reported by the company. This ratio is formulated as follows:

$$PER = \frac{THE\ PRICE\ OF\ EACH\ STOCK\ PRICE}{EPS}$$

The hypothesis of this research is that ROA, EPS and PER have a positive and significant influence on stock prices. In econometric theory, a model that unifies between time series and cross section data produces data called pooled data.

The model in the regression equation can be written in the following formula:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon_{it}$$

where:

$Y$  = Stock Price

$X_1$  = Return on Asset

$X_2$  = Earning Per Share

$X_3$  = Price Earning Ratio

$\beta_0$  = Constanta

$\beta_1, \beta_2, \beta_3$  = coefficient of independent variable regression

$\varepsilon$  = residue (intruder error)

$i$  = company

$t$  = Time

#### Selection of Panel Regression Model

In the panel data model estimation, there are three options that can be taken, namely: Common Effects, Fixed Effects and Random Effects. Common Effect is the simplest panel data estimation technique by combining time series and cross section data with OLS method. This approach does not take

into account individual and time dimensions, consequently the intercepts and slopes are considered equal (constant). Common Effect model can be written in the following formula:

$$Y_{ti} = a + \beta_1 X_{it} + \varepsilon_{it}$$

where:

$i = 1, 2, \dots, N$  (number of cross section data)

$t = 1, 2, \dots, T$  (number of time series data)

Fixed effect has taken into account the diversity or heterogeneity of individuals by assuming that intercepts among different groups of individuals are different, while the slope is considered the same. The definition of fixed effect is based on the difference of intercept among individuals but the same between time (time invariant), while the regression coefficient (slope) is considered to remain good among groups of individuals as well as between time. In fixed effect model, common generalization is often done by giving variable of dummy variable. The goal is to allow the existence of different parameter values to be varied even cross-section and time series across units. The fixed effect model can be written in the following formula [9]:

$$Y_{it} = a_i + \beta X_{it} + \gamma_i \sum D_i + \varepsilon_{it}$$

Or in the form of covariance model in this formula:

$$Y_{it} = a_i + \beta X_{it} + \gamma_2 W_2 + \gamma_3 W_3 + \dots + \gamma_N W_{n1} + \delta_2 W_{i2} + \delta_3 W_{i3} + \dots + \delta_t W_{it} + \varepsilon_{it}$$

where:

$W_{it} = 1$ ; for individual units series  $i, i = 2 \dots, N$ ;

$W_{it} = 0$ ; other;

$Z_{it} = 1$ ; for time period series  $t, t = 2 \dots, T$ ;

$Z_{it} = 0$ ; others.

The decision to include the puppet variable in the fixed effect model definitely will have consequences, namely reducing the number of degrees of freedom, thus reducing the efficiency of the estimated parameters. Related to this, in the panel data model is known third approach, or a random model (random effect). In random effects, different parameters between regions and between times are entered into error. Therefore, the random model is often called the error component model. It is also assumed that the individual errors ( $U_i$ ) are not correlated, nor the combinations ( $\varepsilon_{it}$ ). The random effect model can be written in the following formula:

$$Y_{ti} = a + \beta_1 X_{it} + U_i + \varepsilon_{it}$$

In order to select one of the most appropriate estimation models of the three types of panel data models, it is necessary to do a series of tests, namely:

- 1)  $F$  test statistics is to determine whether or not to use estimation method with individual effect or choose between common effect vs fixed effect. The  $F$  statistic test is a test of the difference of two regressions, in this

case the panel data regression with the assumption of interception and the same slope (common effect). This test is taken by comparing Residual Sum of Squares (RSS) from both regression results. The formula is:

$$Y_{ti} = \frac{(RSS_1 - RSS_2)/m}{(RSS_2)/(n - k)}$$

where:

$RSS_1$ : Residual Sum of Squares with common effect

$RSS_2$ : Residual Sum of Squares with fixed effect

$m$ : numerator (the number of restrictions or restrictions in the common effects model or the number of individual groups is reduced by 1)

$(n-k)$ : denominator,  $n$ : number of observations

$k$ : number of parameters in fixed effect model

The null hypothesis is the same intercept and slope (common effect). The calculated statistic value will follow the statistical distribution  $F$  with degrees of freedom ( $df$ ) of  $m$  for the numerator and  $(n-k)$  for the denominator.

2) Lagrange Multiflier (LM) test to choose using heteroskedastic or homoscedastic structures or to choose between common effect vs. random effect. The LM test is used to select the random effect or common effect model. The LM test can also be called the random effect significance test developed by Bruesch-Pagan (1930).

The LM value is calculated by the formula:

$$LM = \frac{nT}{2(T - 1)} \left[ \frac{\sum_{i=1}^n (Te_i)^2}{\sum_{i=1}^n \sum_{t=1}^T e_{it}^2} - 1 \right]^2$$

where:

$n$  = number of individuals

$T$  = number of time periods

$e$  = residual method of common effect

The LM test is based on the distribution of chi-squares with degree of freedom by the number of independent variables. If the statistical LM value is greater than the critical value of the chi-squares statistic then we reject the null hypothesis, which means the precise estimation for the panel data regression model is the Random Effect method of the Common Effect method. On the contrary, if the statistic value of LM is less than the statistical value of chi-squares as the critical value, then we accept the null hypothesis, which means the estimation used in panel data regression is the Common Effect method instead of the Random Effect method [9].

3) Hausman test to determine the choice of method estimation between fixed effects vs. random effect. The Hausman test can be defined as a statistical test to select whether the Fixed Effect or Random Effect model is most appropriately used. Testing Hausman test is conducted by using the following hypothesis:

$H_0$ : Random Effect Model

$H_1$ : Fixed Effect Model

Hausman's test will follow the chi-squares distribution as follows:

$$m = \hat{q}Var(\hat{q}) - 1 \hat{q}$$

The Hausman test statistic follows the statistical distribution of Chi Square with a degree of freedom as much as  $k$ , where  $k$  is the number of independent variables. If the Hausman statistic value is greater than the critical value then  $H_0$  is rejected and the correct model is the Fixed Effect model whereas the contrary, if the Hausman statistic value is smaller than the critical value then the exact model is the Random Effect model.

In panel regression testing, there are three models of regression analysis, namely Common Effect, Fixed Effect and Random Effect. These three models need to be analyzed to determine the most appropriate model in predicting the company's stock price. The most appropriate model test is done by Redundant Fixed Effects (Chow Test) and Hausman Test as well as Langrange Multiplier Test (LM Test). The Redundant Fixed Effect test examines the panel regression model between the common model and the Fixed Effect model, the Hausman test is used to select the model between Fixed Effect and Random Model, while the LM test is used to select the model between Random and Common Effects. The following Table III contains the results of the analysis using Eviews.

Redundant test (Test Chow) is testing to determine the model of Fixed Effect or Random Effect and later will be chosen the most appropriate model used in estimating panel data. The hypotheses in the chow test are:

$H_0$ : Common Effect Model or pooled OLS

$H_1$ : Fixed Effect Model

The basis of rejection of the above hypothesis is to compare the F-statistic with F-table. The comparison is used when the result of  $F$  count is greater ( $>$ ) than  $F$  table then  $H_0$  is rejected which means the most appropriate model used is Fixed Effect Model. On the contrary, if  $F$  count is smaller ( $<$ ) than  $F$  table then  $H_0$  accepted and model used is Common Effect Model [9].

#### IV. RESULT AND DISCUSSION

The result of redundant fixed effect or likelihood ratio for this model has the value of  $F$  arithmetic is 77.258521 while the  $F$  table is 1.576. Then  $F$  count is greater ( $>$ ) than  $F$  table which means  $H_0$  is rejected and  $H_1$  accepted, the corresponding model of this result is Fixed Effect. Next to determine the more suitable model between Fixed Effect or Random effect is done by using Hausman Test. Hausman test is a statistical test to choose the most appropriate between Fixed Effect or Random Effect model. Testing Hausman test is conducted by using the following hypothesis:

$H_0$ : Random Effect Model

$H_1$ : Fixed Effect Model

$H_0$  is rejected if P-value is smaller than value  $\alpha$ . On the other hand,  $H_0$  is accepted if the P-value is greater than the value of  $\alpha$ . The value of  $\alpha$  used is 5%. From the Hausman Test results in Table III, the P-value of 0.000 is smaller than the value of  $\alpha$ , and the result is 0.05. Thus  $H_0$  is rejected and Fixed Effect Model is accepted. From the two tests above produced consistent results namely the Fixed Effect Model which is considered most appropriate for this research. Since the result is consistent, therefore LM Test, by comparing between Random Effect Model with Common Effect Model need not be done.



TABLE III: THE RESULT OF CHOW AND HAUSMAN TEST

Variable	Common Effect		Fixed Effect		Random Effect	
ROA	1.1628	0.2469	-1.2628	0.2093	-1.7435	0.083
EPS	10.240	0.0000	3.1095	0.0024	5.2653	0.000
PER	-0.6497	0.5169	1.2650	0.2085	1.1814	0.239
Chow Test	77.258					
Sig	0.000					
Hausman Test	28.6020					
Sig	0.0000					

Panel Data Regression Estimation Fixed Effect

This estimation is a technique of estimating panel data using dummy variables to capture the difference between intercept variables but the intercept has same time. In addition, this model also assumes that the regression coefficient (slope) remains constant between the variables and between times. Testing is intended to determine whether the influence of ROA, EPS and PER simultaneously or partially against Stock Price in the banking subsector companies in the Stock Exchange of Indonesia.

In this model, the data used in the study has a different scale, where the stock price as measured by the value of the IDR has a very large range of values, compared to other variables namely in the form of ratios. To obtain the data more homogeneous and has a normal distribution, the stock price data is done data transformation firstly through natural logarithm (NL). The result of Fixed Effect model regression estimation is shown in Table IV.

TABLE IV: FIXED EFFECT

Variable	Fixed Effect	
	Coefficient	Std. Error
C	6.574513	0.049369
ROA	-2.167324	1.716250
EPS	0.001000	0.000322
PER	0.000306	0.000242

Based on the various parameters in the regression equation regarding the factors that affect stock prices, it can be interpreted as follows. Constant value of 6.574513 which means that if there are no independent variables consisting of ROA, EPS and PER affecting stock price, then the stock price will be 6.574513 (Ln) or as big as Anti Ln (6.574935) that is IDR 733.96.

The *t* test is used to analyze the main influence of independent variables of ROA, EPS and PER partially whether it has significant effect on stock price (Y) with significance level of 1%; 5% or 10%. If the probability of the error rate of t-count is smaller than a certain level of significance (1%, 5% or 10%), then there is a significant influence of the independent variable to the dependent variable. Conversely, if the probability of the error rate t-count is greater than a certain level of significance (1%, 5% or 10%), then there is no significant influence of the independent variable to the dependent variable.

ROA ( $X_1$ ) has a negative but insignificant effect on stock prices. Increasing ROA resulted in lower stock prices and vice versa. Besides ROA has no significant effect, it also has a negative value, which means its value is opposite to the movement of stock prices. This result is against the previous research, conducted by [3] and [10], according to their research, ROA variable has a significant and positive influence on stock price. The phenomenon of ROA that influences the stock price is insignificant and negative value

is actually quite rare encountered in other research. But research [11], resulted that ROA variable has a negative effect on stock price. As one indicator of the condition of the ability of a company to utilize its assets to earn revenue, it seems impossible that the value of ROA. But actually there has been a study [12] resulted in the conclusion that there is a strong but negative relationship between asset growth and stock return of the company.

In addition, the effect of non-significant ROA on stock prices and negative values is also possible because the Stock Exchange of Indonesia is arguably categorized in the emerging market. It means there is still intervention from the government, therefore many rules of stock exchange cannot run properly [8].

EPS ( $X_2$ ) has a positive influence on stock prices. This means that between EPS and stock prices indicate an interrelated relationship. Increasing EPS resulted in increasing stock prices, similarly, the decreasing EPS Ratio resulted in lower stock prices. It seems that investors are really looking at these variables before making a stock purchase decision. This result is in accordance with [3], [5] and [10].

PER ( $X_3$ ) has a positive influence on stock prices which means that between PER and stock prices indicate an interrelated relationship. The increasing PER caused the stock price to increase, and vice versa. This result is in accordance with [6], while PER results that have significant and positive impacts are in [7], [10] and [13].

To interpret the results of the selected model test (Fixed Effect), then let's get back to the research hypothesis which states there is a significant influence between ROA, EPS and PER variables simultaneously to stock prices in the banking sub-sector. Based on the data processing, it obtained the results significance 0.000. This shows that Sig F is much smaller than the significance value of 0.01 ( $p < 0.01$ ), then simultaneously at the 1% level of significance, there is the influence of ROA, EPS and PER variables on stock prices in the banking sub-sector companies in Stock Exchange of Indonesia, therefore this study supports the first hypothesis.

Then to show what percentage of stock price that can be explained by the three independent variables can be seen from the amount of coefficient of determination (Adjusted R Square). The coefficient of determination (Adjusted R2) is 0.972868. With the value of determination coefficient of 0.972868, it can be interpreted that 97,28% stock price can be explained by the three independent variables consisting of ROA, EPS and PER. The remaining 2,72% is influenced by other variables not included in the research model.

Based on the results of testing the first hypothesis (Test F), it can be argued that the variables used in this study of ROA, EPS and PER simultaneously and significantly influence the Stock Price. The three independent variables simultaneously affect the stock price can be explained by the result of

equation of 97.28%, while the remaining 2.72% explained by other variables outside the model. Therefore, the regression model used is deserved to be used as a consideration in assessing stocks that are reflected in stock prices.

This indicates that in assessing the stocks reflected in the share price of the company the banking sub-sector, we should use the financial indicators of the company or financial performance of ROA, EPS and PER, so that the stock price formed is the result of the investor's assessment of the company's financial performance factors which affecting the company. If the results of the assessment resulted in the assumption that the investment in the stock is not able to provide welfare to shareholders, investors will give less value to the company and vice versa, the assessment is visible from changes in the existence of stock prices. This result is in line with the previous research conducted [7], [13] and contrary with [4].

## V. CONCLUSION

The results of this study are different from previous studies which states that Return on Assets has a positive effect on stock prices. In the previous study that has been done in the banking sub-sector company on the Stock Exchange of Indonesia, it stated otherwise. The phenomenon of ROA that influences the stock price is not significant and has negative value is actually quite rare encountered in other research. This happens because the government gives a lot of intervention to the Stock Exchange of Indonesia, so that the policy made by the government will affect the rules on the performance of stock prices in Stock Exchange of Indonesia. Therefore, the government should reduce the intervention in the stock market so that financial markets become more independent.

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