THE EFFECT OF RETURN ON ASSETS AND RETURN ON EQUITY ON PRICE TO BOOK VALUE ON BANKING COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE

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Abstract *: Price to Book Value Ratio (PBV) is a ratio that shows the results of the comparison between the market price per share and the book value per share. This ratio is used to measure the level of stock prices whether overvalued or undervalued. The lower the Price to Book Value of a stock, the stock is categorized as undervalued, which is very good for long-term investment. However, the low value of Price to Book Value can also indicate a decline in financial performance. The theory that underlies this research is signaling Theory, which is an action taken by the company to provide instructions for investors about how management views the company's prospects. This signal is in the form of information about what management has done to realize the owner's wishes. This study aims to determine the effect of Return on Assets and Return on Equity on Price to Book Value simultaneously and partially in banking companies listed on the Indonesia Stock Exchange. The method used in this study is an associative approach, and the data used are 2020 data with a large sample of 39 banking companies listed on the Indonesia Stock Exchange with positive Return on Assets, Return on Equity and Price to Book Value values. The results of this study indicate: 1) there is an effect of Return on Assets and Return on Equity on Price to Book Value simultaneously, 2) there is a partial effect of Return on Assets on Price to Book Value and 3) there is no effect of Return on Equity on Price to Value partially.*

Keywords*: Return on Assets, Return on Equity and Price to Book Value.*

1. Introduction

Based on data from the Central Statistics Agency (BPS) that Indonesia's gross domestic product (GDP) in the second quarter of 2020 was minus 5.32 percent. Realization of growth in various business sectors contracted in the April - June 2020 period. However, in the midst of weakening growth due to the Covid-19 pandemic, the financial services sector was still able to grow positively. The financial services sector in the second quarter of 2020 still grew 1.03 percent year on year (YoY). Lower than the same period in 2019, which was 4.49 percent YoY (https://money.kompas.com)

The growth of the banking services sector in the Covid-19 pandemic situation, economic growth tends to slow down. This resulted in a decline in bank lending. Data from Bank Indonesia

(BI) shows that as of August 2020, bank credit growth only rose 0.6% year on year (yoy) to Rp 5,520.9 trillion. The growth was even slower than the previous month which had increased 1% yoy. Credit slowdown actually occurs in all types of credit. However, the hardest hit was working capital credit (KMK), which according to central bank data in the last two months of July-August 2020, had fallen by 1.7% yoy (https://keuangan.kontan.co.id).

Indonesia's economic growth forecast is running slower than initial expectations. Bank Indonesia (BI) cut its projection for economic growth in 2021 to the range of 4.1% to 5.1%. Whereas previously, BI was optimistic that the domestic economy would grow in the range of 4.3% to 5.3%. This revision is considered to be a negative sentiment for the Jakarta Composite Index (JCI). The economic growth projection from BI indicates that the economic recovery tends to be slower than anticipated. (https://www.kontan.co.id)

The theory that underlies this research is Signaling Theory, this theory explains how investors have the same information about the company's prospects. But in reality managers often have better information than investors. Information asymmetry is a condition where private information is only owned by investors who only get information. This will be seen if management does not fully convey all the information obtained about all things that can affect the company, then generally the market will respond to this information as a signal to an event that will affect the value of the company which is reflected in the stock price.

According to Hartono (2016), information published as an announcement will provide a signal for investors in making investment decisions. If the announcement contains a positive value, it is expected that the market will react when the announcement is received by the market

Investors who own company shares in the banking sector listed on this stock exchange will get a rate of return or return in the form of capital gains and dividends. The amount of capital gains received by investors will be influenced by the acquisition price and selling price of the shares, while the dividends received by investors will be influenced by the level of profit earned by the company.

Measurement of the company's ability to increase profits by using Return on Assets and Return on Equity, because these two measurement tools will provide an overview of how asset and equity management generate maximum profit.

Based on the data that the researchers collected in 2020, there were 6 banking companies whose share prices decreased, so that the Return on Assets and Return on Equity were negative. The resulting decline in stock prices resulted in investors not getting the expected capital gains and dividends, even investors will tend to sell their shares at low prices.

2. Theoretical Basis
a. Stock

According to Fahmi (2015) shares are: a). proof of ownership of capital/funds in a company, b). paper that clearly states the nominal value, company name and is followed by the rights and obligations explained to each holder. c). inventory ready for sale.

According to Darmadji and Fakhruddin (2011) stock can be defined as a sign of participation or ownership of a person or entity in a company or limited liability company.

According to Martono and Harjito (2007), stock prices are a reflection of investment decisions, funding (including dividend policy) and asset management. Meanwhile, according to Widoatmodjo (2005), the stock price is the selling price from one investor to another after the shares are listed on the stock exchange, both the main exchange and the OTC (Over The Counter market).

The book value per share of common stock is the economic net worth divided by the number of shares of common stock outstanding. Economic net worth is the difference between total assets and total liabilities. While the market price is the price formed in the market for buying and selling shares. Meanwhile, intrinsic value is the value of the stock that should have happened (Halim, 2015).

b. Price to Book Value

Price to Book Value Ratio (PBV) is a ratio that shows the results of the comparison between the market price per share and the book value per share. This ratio is used to measure the level of stock prices whether overvalued or undervalued. The lower the Price to Book Value of a stock, the stock is categorized as undervalued, which is very good for long-term investment. However, the low price to book value can also indicate a decline in the quality and fundamental performance of the issuer. Therefore, the Price to Book Value must also be compared with the Price to Book Value of shares of other issuers in the same industry. If the difference is too far, then it should be analyzed further (Hery, 2016)

The function of Price to Book Value is: 1) seeing whether a stock is currently traded at a price that is already expensive, still cheap, and/or still reasonable according to its historical average. 2) Determine the current high or low price of a stock based on the estimated fair price for the next one year period.

Calculation of Price to Book Value According to Gitman (2012):

$$Price\ to\ Book\ Value\ Ratio = \frac{Harga\ Saham\ Per\ Lembar}{Nilai\ Buku\ Per\ Lembar\ Saham}$$

Industry Standard Value Price to Book Value The standard value of the company's price to book value is >1 which indicates a worthy stock for consideration

c. Return On Assets.

According to Fahmi (2015) the ratio of Return on Investment or return on investment, that in several other references this ratio is also written as Return on Assets. This ratio looks at the extent to which the investment that has been invested is able to provide a return of profit as expected.

According to Kasmir (2015), explaining that what affects Return on Assets is the return on investment or what is referred to as Return on Assets is influenced by net profit margins and total

asset turnover because if Return on Assets is low it is caused by low profit margins caused by low net profit margin due to low total asset turnover.

According to Munawir (2010), the amount of Return on Assets is influenced by two factors, namely: a) Turnover from Operating Assets (asset turnover rate used for operating profit), b) Profit Margin, namely the amount of operating profit expressed in percentage and total net sales. Profit Margin measures the level of profit that can be achieved by the company in relation to its sales. Return on Assets is measured in ratio units using the following equation:

$$Return\ on\ Assets\ (ROA) = \frac{Earning\ After\ Tax\ (EAT)}{Total\ Assets}$$

d. Return On Equity

According to Fahmi (2015) the ratio of Return on Equity is also known as return on equity. This ratio examines the extent to which a company uses its resources to be able to provide a return on equity.

Return on equity can be used to determine the success of management in managing the company's capital in providing returns to shareholders, the higher this ratio the better because it provides a greater rate of return to shareholders.

Several factors can increase Return on Equity, namely: a) increasing sales without proportionally increasing expenses and costs, b) reducing the cost of goods sold or operating expenses of the company, c) increasing sales relatively on the basis of asset value, either by increasing sales or reduce the amount of investment in selling assets, d) increase the use of debt relative to equity, to a point that does not jeopardize the financial well-being of the company.
Return on Equity can be measured in ratio units using the following equation:

$$Return\ on\ Equity\ (ROE) = \frac{Earning\ After\ Tax\ (EAT)}{Shareholders\ Equity}$$
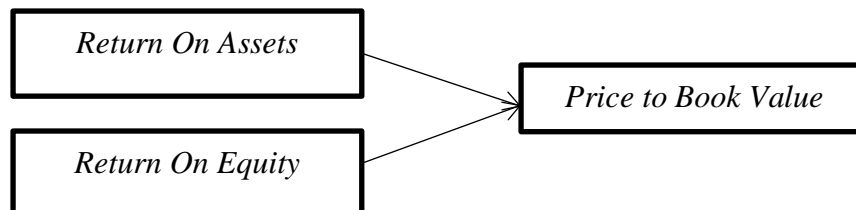
Information :
Shareholders Equity = Owner's equity

The increase in the Return on Equity ratio from year to year in the company means that there is an increase in the net profit of the company concerned, which will cause stock prices, which also means an increase in the value of the company.

Framework

According to Fahmi (2015) financial performance is an analysis carried out to see the extent to which a company has implemented it using financial implementation rules properly and correctly. This study uses financial performance measures of profitability ratios, namely Return on Assets and Return on Equity. Return on Assets will provide an overview of the company's ability to earn profits with the company's asset resources. The greater the level of Return on Assets produced by the

company, the better the financial performance. The indicators used are net income and total assets. Meanwhile, a large Return on Equity means the optimal use of own capital in generating profits.

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┌─────────────────────────┐
│    Return On Assets     │──────┐
└─────────────────────────┘      │     ┌──────────────────────────┐
                                 ├────▶│   Price to Book Value    │
┌─────────────────────────┐      │     └──────────────────────────┘
│    Return On Equity     │──────┘
└─────────────────────────┘
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Picture. 1
Research Thinking Framework

Research Hypothesis

Based on the description above, the hypothesis proposed by the author is as follows:

H1 = There is an effect of Return on Assets and Return on Equity on Price to Book Value in banking companies listed on the Indonesia Stock Exchange.

H2 = There is an effect of Return on Assets on Price to Book Value in banking companies listed on the Indonesia Stock Exchange.

H3 = There is an effect of Return on Equity on Price to Book Value in banking companies listed on the Indonesia Stock Exchange.

3. Research Methodology

In this study, the variables of this study are Return on Assets, Return on Equity and Price to Book Value in banking companies listed on the IDX in 2020. The method of determining the sample is purposive sampling, with the criteria that banking companies that issue financial statements independently complete and have a positive profit during 2020. The sample size of this research is 39 banking companies listed on the Indonesia Stock Exchange in 2020.

Variable Operational Definition

The dependent variable Independent variable (Y) used in this study is the Price to Book Value of each banking company listed on the Indonesia Stock Exchange. Price to Book Value is the market ratio used to measure the performance of the stock market price against its book value.

The first independent variable in this study is Return on Assets. The reason for using Return on Assets is because Return on Assets will produce an overall measurement to generate profits with the total number of assets available in the company.

The second independent variable in this study is Return on Equity. Return on Equity which became the choice as a research variable because of the results of measuring earnings on the basis of the company's own capital. The measurement scale of the three research variables is the ratio scale.

4. Research Results And Discussion

Descriptive Analysis

Data related to this research in the form of Return on Assets, Return on Equity and Price to Book Value are as follows:

Table 2
Data Return on Assets, Return on Equity and Price to Book Value 2020

No.	Code Perusahaan	ROA	ROE	PBV	No.	Code Perusahaan	ROA	ROE	PBV
1	AGRO	0,12	0,80	5,24	21	BNGA	0,88	6,20	0,62
2	AMAR	1,05	3,19	2,11	22	BNII	0,83	5,50	0,99
3	BABP	0,03	0,24	0,83	23	BNLI	0,34	2,38	3,52
4	BACA	0,42	4,97	1,64	24	BRIS	0,45	4,80	4,21
5	BBCA	2,66	14,9	4,66	25	BSIM	0,35	2,24	1,53
6	BBHI	3,03	18,5	5,10	26	BSWD	0,27	0,92	2,16
7	BBMD	2,12	8,38	1,80	27	BTPN	1,10	6,32	0,78
8	BBNI	0,63	5,10	1,02	28	BTPS	4,37	12,2	5,22
9	BBRI	1,30	9,67	2,64	29	BVIC	0,05	0,42	0,37
10	BBSI	2,61	4,36	3,51	30	DNAR	0,33	0,88	0,99
11	BBTN	0,42	8,48	1,04	31	INPC	0,11	0,98	0,33
12	BBYB	0,13	0,52	1,79	32	MAYA	0,32	1,71	3,21
13	BDMIN	1,00	4,48	0,70	33	MCOR	0,21	0,88	0,88
14	BGTG	0,37	1,55	0,72	34	MEGA	2,27	14,7	3,13
15	BINA	0,23	1,08	3,39	35	NISP	1,31	8,78	0,64
16	BJBR	1,08	14,3	1,37	36	NOBU	0,54	4,44	2,46
17	BJTM	1,79	15,2	1,06	37	PNBN	1,42	6,92	0,58
18	BMAS	0,64	4,39	1,51	38	PNBS	0,00	0.02	1,97
19	BRMI	1,33	9,88	1,56	39	SDRA	1,42	7,81	0,68
20	BNBA	0,50	2,71	0,58					

Classic Assumption Test Results

Normality Test

The normality test aims to test whether in the regression model, the confounding or residual variables have a normal distribution (Ghozali, 2017). There are two ways to detect whether the residuals are normally distributed or not, namely by graphical analysis and statistical tests. The normality test in this study used the Kolmogrov-Smirnov model. The decision-making guidelines of the Kolmogrov-Smirnov test, namely:

a. Significant value (sig) or probability <0.05 then the data distribution is not normal.

b. Significant value (sig) or probability > 0.05 then the data distribution is normal.

Table 3
Normality Test Results

One-Sample Kolmogorov-Smirnov Test

		Standardized Residual
N		39
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.97332853
Most Extreme Differences	Absolute	.125
	Positive	.125
	Negative	-.090
Kolmogorov-Smirnov Z		.780
Asymp. Sig. (2-tailed)		.576

a. Test distribution is Normal.

b. Calculated from data.

Source: Processed by Researchers (2021)

Based on table 3 above, the significant value generated is 0.576, which means > 0.05, so the decision is that the data used in this study is normally distributed.

Multicollinearity Test

The purpose of this test is to test whether in the regression model formed there is a high or perfect correlation between the independent variables or not. If there is a high or perfect correlation between the independent variables, it is declared to contain multicollinearity symptoms and the regression model is considered inappropriate. According to Ghozali (2012) there is multicollinearity if the TOL value is less than 0.10 or the VIF value is greater than 10.

Table 4
Multicollinearity Test Results

Coefficients[a]

| Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.385	.325		4.266	.000		
	ROA	.920	.355	.613	2.594	.014	.385	2.599
	ROE	-.056	.069	-.192	-.813	.422	.385	2.599

a. Dependent Variable: PBV

Source: Processed by Researchers (2021)

Table 4 above shows that each variable has a Tolerance value greater than 0.1 (Tolerance > 0.1) and a VIF value less than 10 (VIF < 10), so it can be seen that in the regression model there is no multicollinearity.

Heteroscedasticity Test

Heteroscedasticity test is done by looking at the scatterplot between the standard residuals and their predictions. Basis of decision making from scatterplot:

a. If there is a certain pattern, such as the existing points forming a certain regular pattern (wavy, widening, then narrowing), then heteroscedasticity has occurred.
b. If there is no clear pattern, and the points spread above and below the number 0 on the Y axis, then there is no heteroscedasticity.
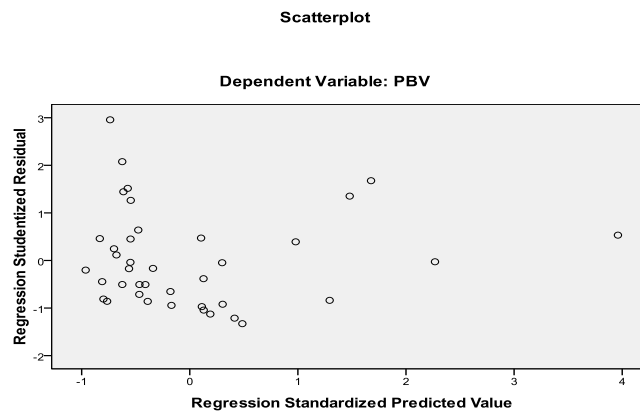
Source: Processed by Researchers (2021)
Figure 2
Heteroscedasticity Test

Based on Figure 2 above, it can be seen that there is no clear pattern, and the points spread above and below the number 0 on the Y axis, so there is no Heteroscedasticity

Multiple Regression
Multiple regression analysis was used to determine the effect of Return on Assets and Return on Equity on Price to Book Value.
Based on table 2, the regression equation can be arranged as follows:

$Y = 1.385 + 0.920 X1 - 0.056X2$

The constant value is 1.385, which means that if the banking company does not take into account Return on Assets and Return on Equity, the Price to Book Value will remain constant at positive 1.385.

The b1 value is 0.920, which means that if the banking company takes into account Return on Assets to increase Price to Book Value, the magnitude of the effect of the increase in Price to Book Value is 0.920 from Return on Assets, assuming Return on Equity is not taken into account.

The b2 value is -0.056, which means that if the banking company calculates Return on Equity to increase Price to Book Value, then the magnitude of the effect of Price to Book Value decreases by negative 0.056 from Return on Equity assuming Return on Assets is not taken into account.

Hypothesis Testing Results
Hypothesis Testing Simultaneously (Test -F)
The formulation of the statistical hypothesis is:
H0: 1, 2 = 0 (there is no effect of Return on Assets and Return on Equity on Price to Book Value).
Ha: 1, 2 0 (there is an effect of Return on Assets and Return on Equity on Price to Book Value).
     Testing Criteria if Fcount > Ftable or sig < 0.05 then H0 is rejected and Ha is accepted and if Fcount < Ftable or sig > 0.05 then H0 is accepted and Ha is rejected

The following are the results of Anova Analysis:

Table 5
Anova Analysis Results

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.395	2	9.198	5.307	.010[a]
	Residual	62.396	36	1.733		
	Total	80.791	38			

a. Predictors: (Constant), ROE, ROA

b. Dependent Variable: PBV

Source: Processed by Researchers (2021)

     The F test is basically to test whether Return on Assets and Return on Equity affect Price to Book Value, it can be seen in table 5 above that the calculated F is 5.307 with a significance level of 0.010a, the F table price is 3.259 (that is, by Finv(0.05) ,df1,df2); df1 = k-1 ; df2 = n − k; n = number of samples; k = independent variable + dependent variable, then: df1 = 3 − 1 = 2; df2 = 39 − 3 = 36, So F 0.05(2)(36) = 3.259 with excel by typing =FINV(0.05;2;36)enter.
     Because F count > F table (5.307 > 3.259) or research significance value < 0.05 (0.000 < 0.05) then Ho is rejected and Ha is accepted. Ha is accepted, meaning that there is an effect of Return on Assets and Return on Equity on the Price to Book Value of banking companies listed on the Indonesia Stock Exchange.

Partial Hypothesis Testing (t-test)
Effect of Return on Assets on Price to Book Value
The formulation of the statistical hypothesis is:
H0 : 1= 0 (there is no Return on Assets to Price to Book Value).
Ha : 1 0 (there is an effect of Return on Assets on Price to Book Value).
     The test criteria if tcount > ttable, then H0 is rejected and Ha is accepted and if tcount < ttable, then H0 is accepted and Ha is rejected. Or if Sig < 0.05 then H0 is rejected and Ha is accepted and if Sig > 0.05 then H0 is accepted and Ha is rejected.

The results of the Return on Assets hypothesis test on Price to Book Value based on table 4 data that the t-count value is 2.594 and the significant value is 0.014. The t table value can be calculated with a significance level (α) = 5% degrees of freedom = n – k – 1 or 39 – 1 – 1 = 37 (k is the number of independent variables) and the test is carried out with two sides (2 -tiled), using excel type =TINV(0,05;37) enter to get t table of 2,026. From the data above, it is stated that tcount > ttable (2.594 > 2.026) and a significance value of 0.014 <0.05, then Ho is rejected and Ha is accepted. Ha is accepted, meaning that there is an effect of return on assets on the Price to Book Value of banking companies listed on the Indonesia Stock Exchange.

Effect of Return on Equity on Price to Book Value
The formulation of the statistical hypothesis is:
H0 : 1= 0 (there is no Return on Equity on Price to Book Value).
Ha : 1 0 (there is an effect of Return on Equity on Price to Book Value).

The test criteria if tcount > ttable, then H0 is rejected and Ha is accepted and if tcount < ttable, then H0 is accepted and Ha is rejected. Or if Sig < 0.05 then H0 is rejected and Ha is accepted and if Sig > 0.05 then H0 is accepted and Ha is rejected.

The results of the Return on Assets hypothesis test on Price to Book Value based on table 4 data, that the t-count value is negative 0.813 and the significant value is 0.422. The t table value can be calculated with a significance level (α) = 5% degrees of freedom = n – k – 1 or 39 – 1 – 1 = 37 (k is the number of independent variables) and the test is carried out with two sides (2 -tiled), using excel type =TINV(0,05;37) enter to get t table of 2,026. From the data above, it is stated that tcount < ttable (-0.813 < -2.026) and a significance value of 0.422 > 0.05, so Ho is accepted and Ha is rejected. Ho is accepted, meaning that there is an effect of Return on Equity on the Price to Book Value of banking companies listed on the Indonesia Stock Exchange.

5. Conclusion
In the closing section, the researcher will provide conclusions and suggestions. The conclusions in this study are as follows:
1) The results of research on 39 banking companies listed on the Indonesia Stock Exchange with data for 2020, show that Return on Assets and Return on Equity have an effect on Price to Book Value.
2) The results of the study for the Return on Assets variable on Price to Book Value indicate that there is an influence between Return on Assets and Price to Book Value.
3) The results of the research for the Return on Equity variable on Price to Book Value show that there is no effect between Return on Equity and Price to Book Value.

Suggestion

Based on the conclusions above, in this study can provide suggestions as follows:

1) For researchers who will conduct research with the same title, it is recommended to add more variables or more data samples, so that the level of influence is significant.
2) For banking companies whose Price to Book Value has decreased, they can carry out further analysis of the factors that can increase Price to Book Value.
3) For banking companies whose Return on Assets or Return on Equity is still considered to be less than expected, it is necessary to take action to increase the elements that make up Return on Assets or Return on Equity.

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