

# THE EFFECT OF RETURN ON ASSET (ROA) AND RETURN ON EQUITY (ROE) ON PRICE BOOK VALUE (PBV) IN REGIONAL DEVELOPMENT BANKS LISTING ON THE INDONESIA STOCK EXCHANGE (IDX).

Natali Ikawidjaja<sup>1</sup>, Faisal Rizal Zaenal<sup>2</sup>, Erik Rachim<sup>3</sup>, Andi TenriUleng Akal<sup>4</sup>

<sup>1</sup>Lecturer at STIE Ciputra, Makassar, Indonesia

<sup>2,3</sup>Lecturer at Institute Technology and Business of Nobel Indonesia, Makassar

<sup>4</sup>Lecturer at STIE Trie Dharma Makassar, Indonesia

\*Corresponding Author: Natali Ikawidjaja

**Abstract:** This study aims to analyze the effect of Return on Assets (ROA) and Return on Equity (ROE) on Price Book Value (PBV) at Regional Development Banks (BPD) listed on the Indonesia Stock Exchange (IDX). The object of this research is the Regional Development Bank (BPD) which is listed on the Indonesia Stock Exchange (IDX). The method used in this research is descriptive quantitative, which is a research approach that uses lots of numbers, starting with data collection, interpretation of the data obtained, and presenting the results using secondary data, namely financial data in 2019-2023 on a quarterly basis (53 financial data). The results showed that Return on Assets (ROA) had a positive and significant effect on Price Book Value (PBV) at Regional Development Banks (PBV) listed on the Indonesia Stock Exchange (IDX), while Return on Equity (ROE) had a negative but not significant effect. to Price Book Value (PBV) at Regional Development Banks (PBV) listed on the Indonesia Stock Exchange (IDX). The results of the study also show that Return on Assets (ROA) and Return on Equity (ROE) on Price Book Value (PBV) at Regional Development Banks (BPD) listed on the Indonesia Stock Exchange (IDX) with a determination value of 91.5%.

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

## I. INTRODUCTION

Bank is a financial institution that functions as an intermediary between the owner of the funds and those who will manage the funds either for personal needs or to make investments. Banks also have a role as a party whose function is to facilitate and expedite receipts and payments. A bank is a financial institution that is generally established with the authority to receive money deposits, lend money, and issue promissory notes or banknotes [1]. Broadly speaking, the role of banking in the economy is, first, to carry out the transmission function. Second, collect and distribute funds (intermediation function). Third, transforming and distributing risk in an economy (transformation and distribution of risk function) [2]. Fourth, as well as instruments to stabilize economic conditions (stabilization function). The economic development of a nation must be fostered to improve the welfare of its citizens [3].

Regional Development Banks in Indonesia were established with the aim of moving and boosting the pace of the regional economy. The Regional Development Bank (BPD) is a group of financial institutions that play a role in driving the regional economy by supporting regional development financing. In order to support regional development financing and strengthen its function as an intermediary institution, the BPD must be able to improve efficiency in carrying out its operations. Therefore, an analysis of the efficiency of Regional Development Banks needs to be carried out to determine the level of efficiency and then take corrective action so that the BPD can carry out its function as an intermediary institution properly [4].

The role of Regional Development Banks in Indonesia is still very low. Various studies state that the existence of BPD in the national economy, especially the regional economy, is still relatively low [5].

BPD's contribution to regional development is still marginal, this can be seen from the still low percentage of productive credit which only reaches 26% according to the Financial Services Authority (OJK 2015). The increase in non-performing loans was due to weak governance, human resources, risk management and infrastructure. Therefore, BPD must make changes to overcome these structural weaknesses and improve the organizational foundation so that they can compete and develop and ultimately play a bigger role in the economy [6].

Return on Assets (ROA) and Return on Equity (ROE) are very important financial ratios. Return on Assets (ROA) is a ratio used to measure a company's ability to generate profits because this ratio represents the return on company activities [7]. ROA is not a perfect measure, but it is the most effective and widely available financial measure for assessing company performance. ROA is also less susceptible to the kinds of short-term plays that can occur on the income statement because many assets, such as property, plant, and equipment, as well as intangible assets, involve long-term asset decisions that are more difficult to change. short term [8].

The company's goal is to maximize the prosperity of shareholders or company owners (wealth of the shareholders). This normative goal can be realized by maximizing the market value of the firm (9). Price Book Value (PBV) is a financial ratio that measures the value of a company. If investors want to invest in a company, they can do a Price to Book Value (PBV) ratio so they can find out the price of a share of a company, whether it is cheap or expensive [10].

Based on this background, the research is interested in taking the title The Effect of Return on Assets (ROA) and Return on Equity (RE) On Price Book Value (PBV) in Regional Development Banks Listing on The Indonesia Stock Exchange (IDX).

## **II. LITERATURE REVIEW**

### **A. Return on Asset (ROA)**

Return on Assets (ROA) is one of the profitability ratios. In the analysis of financial statements, this ratio is most often highlighted, because it is able to show the company's success in generating profits. ROA is able to measure a company's ability to generate profits in the past to then be projected in the future. The assets or assets in question are all of the company's assets, obtained from its own capital or from foreign capital that the company has converted into company assets that are used for the company's survival. According to Brigham and Houston (2001), "The ratio of net profit to total assets measures the return on total assets (ROA) after interest and taxes".

According to Horne and Wachowicz (2005), "ROA measures overall effectiveness in generating profits through available assets; power to generate profit from invested capital". Horne and Wachowicz calculate ROA using the formula for net profit after tax divided by total assets. Bambang Riyanto (2001) mentions the term ROA with the Net Earning Power Ratio (Rate of Return on Investment / ROI), which is the ability of the capital invested in all assets to generate net profits. The net profit he meant was net profit after tax. From the description above it can be concluded that ROA or ROI in this study is a measure of the comparison between net income after deducting interest and taxes (Earning After Taxes / EAT) resulting from the main activities of the company with the total assets (assets) owned by the company to carry out activities company as a whole and expressed as a percentage. The advantages of Return on Assets (ROA) include the following:

- 1) ROA is easy to calculate and understand.
- 2) It is a management performance measurement tool that is sensitive to any influence on the company's financial condition.
- 3) Management focuses its attention on obtaining maximum profits.
- 4) As a benchmark for management performance in utilizing the company's assets to earn profits.
- 5) Encouraging the achievement of company goals.
- 6) As a tool to evaluate the implementation of management policies.

In addition to the several advantages of Return on Assets (ROA) above, Return on Assets (ROA) also has weaknesses including:

- 1) Not encouraging management to add assets if the expected ROA value is too high.
- 2) Management tends to focus on short-term goals rather than long-term goals, so they tend to make short-term decisions that are more profitable but have negative long-term consequences.

**B. Return on Equity (ROE)**

The profitability ratio is a ratio to assess the company's ability to seek profits or profits in a certain period. This ratio also provides a measure of the effectiveness of a company's management as indicated by the profit generated from sales or from investment income. It is said that the company has good profitability if it is able to meet the profit targets that have been set by using its assets or capital [8].

Profitability ratios are classified into two, namely Return On Assets (ROA) and Return On Equity (ROE). Return On Assets (ROA) is a profitability ratio that shows the comparison between profit (before tax) and total bank assets. The second is Return On Equity (ROE) which is a profitability ratio that shows a comparison between profit (after tax) and bank capital (core capital), this ratio shows the percentage level that can be generated in managing available capital to get net income [9].

Return On Equity (ROE) has goals and benefits, not only for company owners or management, but also for parties outside the company, especially those who have a relationship or interest in the company. According to Kasmir, Return on Equity (ROE) is a type of profitability ratio. The goals and benefits of using profitability ratios for companies, as well as for parties outside the company, namely [8]:

- 1) To measure or calculate the profit earned by the company in a certain period.
- 2) To assess the company's profit position in the previous year with the current year
- 3) To assess the development of profits from time to time.
- 4) To assess the amount of net profit after tax with own capital.
- 5) To measure the productivity of all company funds used both loan capital and own capital.

From these several purposes and benefits of Return on Equity described above, it can be said that Return on Equity is used to calculate and measure, as well as analyze the profit earned by the company.

**C. Price Book Value (PBV)**

Price to Book Value Ratio (PBV) is a ratio that shows the result of a 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 PBV value of a stock, the stock is categorized as undervalued, which is very good for long-term investment. However, a low PBV value can also indicate a decline in the quality and performance of the issuer's fundamentals. Therefore, the PBV value must also be compared with the PBV of other issuers' shares in the same industry. If the difference is too great, then it should be further analyzed (Hery, 2016: 145)

PBV is the market ratio used to measure the performance of stock market prices to book value which is supported by Jones (2000) in Musdalifah, Sri, and Maryam (2015: 256), that PBV or price per book value ratio is the relationship between stock market prices and book value per share.

According to Rosenbergetal (1985) in Musdalifah, Sri, and Maryam (2015: 256) that the greater the PBV value, the higher the market price of the stock. If the market price of a stock is higher, then the required stock return is also higher. Companies with good performance usually have a PBV ratio above one, this indicates that the market value of the stock is higher than the book value. There are two things that become a function of Price to Book Value:

- 1) Seeing whether a stock is currently being traded at a price that is already expensive, still cheap, and/or still reasonable according to its historical average.
- 2) Determine how expensive or cheap a stock is currently based on an estimate of the fair price for the next one year.

**D. Conceptual Framework**

Based on the previous description and literature review, the related variables in this study can be formulated into a conceptual framework as follows:

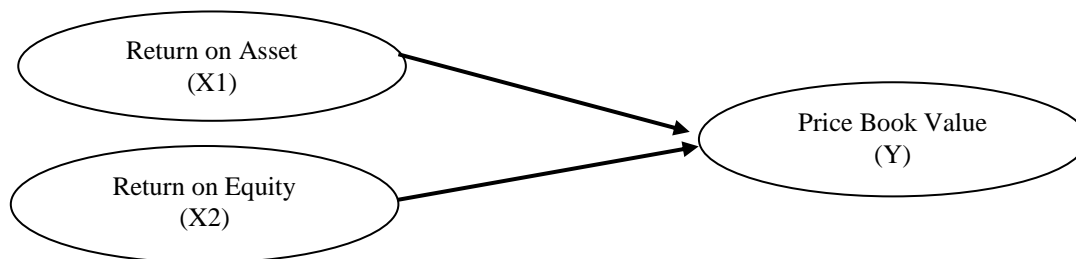


Fig. 1. Conceptual framework

According to the picture above, it can be described that Return on Asset (ROA) dan Return on Equity (ROE) can affect Price Book Value (PBV).

### III. RESEARCH METHOD

#### A. Research Design

The research design is explanatory research with quantitative methods, namely a research approach that uses a lot of numbers, starting from collecting data, interpreting the data obtained, and presenting the results (Arikunto, 2006).

#### B. Object of research

The objects of this research are Regional Development Banks (BPD) which are listed on the Indonesia Stock Exchange (IDX), namely Banten Regional Development Bank, West Java Regional Development Bank and East Java Regional Development Bank. The financial reports used are the 2019-2023 annual financial reports in the form of quarterly data.

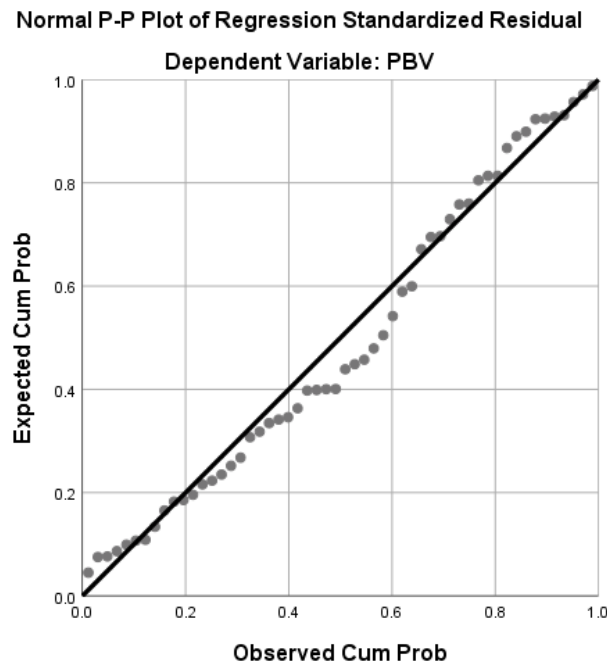
#### C. Data analysis technique

To solve the main problems faced in this research, an analytical method is used, namely descriptive analysis, namely an analysis that describes the results of secondary data. This study uses an analytical tool, namely SPSS version 25 software.

### IV. RESULT

#### A. Classic assumption test

Heteroscedasticity is a classic requirement in linear regression analysis which must not occur which means that the residual variance must be the same. By using the SPSS version 25 program package, heteroscedasticity symptoms can be detected through the dependent variable scatterplot graph as follows:



Graph 1. Dependent Variable Scatterplot

The graph in the graph above shows the points spread randomly and do not form a certain pattern, besides that they are spread above and below the number 0 on the Y axis. Thus, it does not

shows symptoms of heteroscedasticity in the regression model.

**B. Multiple Regression Test**

Based on the results of multiple regression analysis using SPSS version 25, it shows that there is a relationship and variation in the direction of the relationship between the independent variable and the dependent variable. The influence and direction of the relationship can be shown in the following table:

Table 1. Effect of the Independent Variable (X) on the dependent variable (Y).  
Coefficients a

Model		Unstandardized Coefficients		Sig.
		B	Std. Error	
1	(Constant)	2.267	.074	.000
	ROA	.875	.000	.000
	ROE	-.169	.000	.000

Source: Processed data (2023)

Based on the results of the regression analysis in the table above, it shows that the ROA variable has a positive effect on PBV and ROE shows a negative effect on PBV. From the results of the analysis, the regression equation is compiled as follows:

$$Y = 2.267 + 0,875X_1 - 0,169 X_2$$

From the results of the multiple regression equation, it can be interpreted as follows:

1. Constant (a)  
This means that if the Return on Asset (ROA) and Return on Equity (ROE) have a value of 0 (zero) then the Net Profit is 2.267.
2. The Effect of Return on Asset (ROA) on Price Book Value (PBV)  
The value of the leverage coefficient for Return on Asset (ROA) is 0,875 and a positive sign means that Return on Asset (ROA) has a unidirectional relationship with Price Book Value (PBV). For every one unit increase in Return on Asset (ROA), Price Book Value (PBV) will increase by 0.875 and vice versa.
3. Effect of Return on Ekuitas (ROE) on Price Book Value (PBV)  
The value of the leverage coefficient for Return on Ekuitas (ROE) is 0.169 and a negative sign means that Return on Ekuitas (ROE) has an indirect relationship with Price Book Value (PBV). For every one unit increase in Return on Ekuitas (ROE), Price Book Value (PBV) will decrease by 0.169.

**C. Simultaneous Testing (F Test)**

The *f* test is used to determine the effect of the variables simultaneously, namely communication and motivation and work disciplines simultaneously affecting employee performance. The test is done by comparing the value of *F* count and *F* table. If the value of *F* count is greater than *F* table, it has a significant effect on the dependent variable. The results of the *f* test calculations can be seen in the following table:

Table 2 Calculation Result of *f* . Test ANOVA a

Model		F	Sig.
1	Regression	276.185	.000b
	Residual		
	Total		

Source: Processed data (2023)

Based on table 2, it can be seen that the results of statistical calculations show the value of  $F_{count} = 276,186 > F_{table} = 2.64$  using a significance limit of 0.05, so from the table above, a significance value of less than 0.05 is obtained, it can be concluded that Return on Asset (ROA) and Return on Equity (ROE) have a joint effect on Price Book Value (PBV).

**D. T Test (Partial Test)**

The t-test is used to determine whether the independent variable partially has a significant effect on the dependent variable. The degree of significance used is 0.05. If the significant value is less than the degree of confidence, then we accept the alternative hypothesis, which states that an independent variable partially affects dependent variable. T-test analysis is also seen from the table as follows:

Table 3. The Effect of Partial Independent Variables on the Dependent Variable. Coefficients a

Model		t	Sig.
1	(Constant)	30.776	.000
	Working Capital	11.138	.000
	Sales Volume	-19.305	.000

Source: Processed data (2023)

1. The Partial Effect of Return on Asset (ROA) on Price Book Value (PBV)  
From table 3 it can be concluded that the regional working capital has a t count of 11.138 with  $t_{table} = 1.674$ . So  $t_{count} > t_{table}$  or  $11.138 > 1.674$  with a significance value of 0.000 meaning less than 0.05 it can be concluded that Return on Asset (ROA) has significant effect on Price Book Value (PBV).
2. Partial Effect of Return on Ekuitas (ROE) on Price Book Value (PBV)  
From table 3 it can be concluded that the Return on Ekuitas (ROE) has a t count of -19,305 with  $t_{table} = 1.674$ . So  $t_{count} < t_{table}$  or  $-19,305 < 1.65$  with a significance value of 0.000 meaning less than 0.05, it can be concluded that Return on Ekuitas (ROE) has a not significant effect on Price Book Value (PBV).

**E. Coefficient of determination test (R<sup>2</sup>)**

The coefficient of determination is used to find out how big the relationship of several variables is in a clearer sense. The coefficient of determination will explain how much change or variation in a variable can be explained by changes or variations in other variables (Santosa & Ashari, 2005). The value of this coefficient is between 0 and 1, if the result is close to 0 it means the ability of the independent variable to explain the variation of the variable is very limited. But if the result is close to 1, it means that the independent variables provide almost all the information needed to predict the variation of the dependent variable. For analysis using SPSS output can be seen in the table "Model Summary" as follows:

Table 4. The effect of the independent variable on the dependent variable Model Summary b

Model	R	R Square	Adjusted R Square
1	.957 <sup>a</sup>	.915	.912

Based on Table 4. it can be concluded that the Return on Asset (ROA) and Return on Equity (ROE) have an effect of 91.5% on Price Book Value (PBV), while 8.5% is influenced by other variables not

examined. Because the value of R Square is above 5%, it can be concluded that the ability of the independent variable in explaining the dependent variation is very good.

## **V. DISCUSSION**

Return on Assets (ROA) has a positive and significant effect on Price Book Value (PBV). This means that any increase in the company's ability to return their assets will increase the value of the company. This research is in line with research conducted by Akbar (2021) with the results of the Return on Assets hypothesis test on Price to Book Value, a t count value of 2.594 is obtained and a significant value is 0.014, a t table is 2.026, so it is stated that  $t_{count} > t_{table}$  ( $2.594 > 2.026$ ) and a significance value of  $0.014 < 0.05$  then  $H_0$  is rejected and  $H_a$  is accepted.  $H_a$  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. This research is not in line with research conducted by Zulkhijar, et al (2021) with the results of the study that the ROA variable obtained a t count of 0.073 which is smaller than a t table of 2.028. besides that the probability value obtained is  $0.942 > 0.05$  so it can be concluded that ROA has no significant effect on PBV.

Return on Equity (ROE) has a negative but not significant effect on Price Book Value (PBV). This means that any increase in the company's ability to return their equity will reduce the value of the company, although not significantly. This research is not in line with research conducted by Pustika, et al (2022) with the results of the research that Return on Assets (ROA) has a positive and significant effect on Price Book Value (PBV). This means that any increase in the company's ability to return their assets will increase the value of the company.

## **VI. CONCLUSION**

Based on the results of research and discussion in this study, it can be concluded that:

1. Return on Assets (ROA) has a positive and significant effect on Price Book Value at Regional Development Banks (BPD) listed on the Indonesia Stock Exchange (IDX).
2. Return on Equity (ROE) has a negative but not significant effect on Price Book Value at Regional Development Banks (BPD) listed on the Indonesia Stock Exchange (IDX).

## **REFERENCES**

- [1] H. A. Sutanto, "ANALISIS EFISIENSI TEKNIS BANK PEMBANGUN," *JEJAK*, vol. 8, no. 1, Mar. 2015, doi: 10.15294/jejak.v8i1.3851.
- [2] F. T. Satyagraha, R. Purwono, and D. W. Sari, "An Analysis of the Performance of Regional Development Banks (RDB) in Indonesia: Stochastic Frontier Analysis Approach," *Economies*, vol. 10, no. 9, Sep. 2022, doi: 10.3390/economies10090228.
- [3] OJK, "Program Transformasi BPD: Menjadi Bank yang Kompetitif, Kuat, dan Kontributif bagi Pembangunan Daerah," 2015.
- [4] M. Razak, A. Ribo, Z. Abidin, and F. R. Zainal, "Effect of Earnings Per Share, Net Profit Margin, and Return on Asset on Price to Book Value in Food and Beverage Manufacturing Companies Listed on The Indonesia Stock Exchange," 2022. [Online]. Available: [www.aijbm.com](http://www.aijbm.com)
- [5] J. Hagel, J. S. Brown, T. Samoylova, and M. Lui, "Successor struggle: ROA as a true measure of business performance Report 3 of the 2013 Shift Index series From the Deloitte Center for the Edge," 2013. [Online]. Available: [www.deloitte.com/us/shiftindex](http://www.deloitte.com/us/shiftindex)
- [6] Z. Abidin, "The Effect of Shareholding on Dividends Obtained by The Regional Government of Sinjai Regency," *Patria Artha Journal of Accounting & Financial Reporting*, vol. 2, no. 1, pp. 93–112, Apr. 2018.
- [7] N. Fadhilah, A. Khalik, and Z. Abidin, "Pengaruh Debt to Asset Ratio (DAR), Debt to Equity Ratio (DER) dan Return on Assets (ROA) terhadap Price To Book Value (PBV) pada Perusahaan Perbankan Syariah yang terdaftar di Bursa Efek Indonesia," *Jurnal The Manusagre*, vol. 1, no. 1, pp. 180–193, 2022.
- [8] Kasmir, *Analisis Laporan Keuangan*. Jakarta: Rajawali Pers, 2013.
- [9] R. Selamet, *Banking Assets and Liability Management. Edisi Ketiga*. Jakarta: FE UI, 2006, 2006.