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The Effect of Loan to Deposit Ratio (LDR) on Return On Assets (ROA) at PT. Bank Mandiri (Persero) Tbk.

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ABSTRACT

The purpose of this study was to determine the effect of loan to deposit ratio on Return on Assets at PT. Bank Mandiri (Persero) Tbk in 2016-2020. The types of data used are qualitative and quantitative data. The data source used is secondary data. The analytical method used is simple linear regression with the equation Y = -8.077 + 0.115X. The value of the correlation coefficient (r) is 0.889, the coefficient of determination r2 is 0.808, the results of the t-test calculation where the t-count is 3.550 from the t-table 2.353 then H0 is rejected and Ha is accepted, meaning that the loan to deposit ratio has a significant positive effect on return on assets of 80.8% the remaining 19.2% is influenced by other variables. So the hypothesis in this study is accepted.

Keywords: ROA; LDR; Bank Mandiri

INTRODUCTION

Banks as trust institutions or public intermediary institutions and are part of the monetary system have a strategic position as a supporter of economic development (Collier, 2000; Du et al., 2007; Schnellenbach, 2007). Bank management is required to always maintain a balance between maintaining adequate levels of liquidity and high bank profitability as well as meeting capital requirements. The maintenance of bank health is carried out, among others, by maintaining liquidity so that the bank can fulfill its obligations to all parties who withdraw or withdraw their deposits at any time.

Today the banking industry is an industry that has progressed the most rapidly compared to other industries. This is due to the government's deregulation of banking in 1983, this deregulation greatly influenced banking patterns and strategies both in terms of assets and liabilities of banking itself. This situation forces the banking industry to be more creative and innovative in developing and obtaining new sources of funds. With the increase in the number of banks, competition to attract funds from the public is increasing. All banks are competing to collect funds from the public which will later be channeled back to the bank (Akib et al., n.d.; Cetorelli & Goldberg, 2011; Diamond & Rajan, 2001; Hudjir et al., 2021; Revualu et al., 2018; Sobiech et al., 2021).

Society for those in need for both productive and consumptive purposes. Because for banks, funds are the most important problem. Without funds, the bank will not function properly. Funds collected from the public are usually kept in the form of demand deposits, time deposits and savings. According to the Law of the Republic of Indonesia Number 10 of 1998 dated November 10, 1998 concerning "Banking" it is stated that what

is meant by a bank is a business entity that collects funds from the public in the form of savings and distributes them to the public in the form of credit and or other forms in order to increase standard of living of many people. Based on the above understanding, it can be explained more broadly that the bank is an intermediary institution (financial intermediary) between parties who have funds and parties who need funds, banks also help smooth the payment system, for example, banks are used as a place to exchange money, a place to receive all kinds of payments such as telephone credit payments, electricity payments, tuition payments, etc. Banks are institutions that are instrumental in implementing government policies, such as distributing micro-credit to support prospective entrepreneurs, accepting deposits and providing credit in foreign currencies.

In addition, the bank is an industry that in its business activities rely on public trust so that the soundness of the bank should be maintained, with the existence of a healthy bank, is a prerequisite for a healthy economy. A healthy bank is a bank that can carry out its functions properly. In other words, a healthy bank is a bank that can maintain and maintain public trust, can carry out the intermediation function, can help smooth payment traffic and can be used by the government in implementing various policies, especially monetary policy. The fundamental objective of the banking business is to obtain optimal profits by providing financial services to the public. Shareholders who invest their capital in banks aim to earn income in the form of dividends or gain profits by increasing the price of the shares they have owned. Along with the times, the community's need for managing their funds is also increasing. People will prefer to save their funds in banks that can survive in the midst of economic turmoil that is less stable and less likely, therefore the public certainly needs information about the condition of the existing banking financial performance to be used as a race or reference in choosing a bank. Bank's financial performance can be assessed from several indicators. One of the main sources of indicators used as the basis for the assessment is the financial statements of the bank concerned. The bank's financial report will be useful for the parties who need it if the report is analyzed further. In analyzing the financial statements of a company, certain tools are needed. The most commonly used tool is the financial ratio.

Factors that affect bank profitability can be sourced from various profitability performances shown by several indicators. An important profitability ratio for banks is return on assets (ROA). ROA is important for banks because ROA is used to measure the effectiveness of the company in generating profits by utilizing its assets. ROA is the ratio between profit after tax to total assets. The greater the ROA, the better the company's performance, so that the final impact is an increase in profitability enjoyed by shareholders.

As for several things that affect the performance of a bank or the health of a bank, another variable used is the loan to deposit ratio (LDR) to see the Liquidity aspect. "A healthy bank is a bank that is measured by profitability which continues to increase" (Campanella et al., 2020; Leccis, 2019; Ramos & Casado-Molina, 2021; Tadampali et al.,

2016). Where in this study ROA is used as a measure of company performance and the loan to deposit ratio (LDR) is a liquidity ratio that compares the amount of funds distributed to the public (credit) with the amount of public funds and own capital used. LDR reflects the ratio between the financing provided by commercial banks to their customers compared to the funds that enter or are collected from the public. The LDR safe limit is around 80% but the tolerance limit is around 85% - 100%. Judging from the ability to channel credit, the higher the LDR ratio, the higher the amount of third party funds disbursed in the form of credit. So that the profit obtained from lending is even higher. This is in accordance with the results of research by (Raharjo & Haryanto, 2015; Siregar & Dewi, 2019)that LDR has a positive effect on performance. That the higher the LDR ratio, the higher the ROA. However, in the research of Luciana and Windy (2015), the results of the research are that the higher the LDR ratio, the lower the ability of the bank concerned, causing the bank to be in a problematic condition. This study seeks to develop previous research on the performance of a bank. The existence of differences in results in previous studies prompted researchers to conduct research with the title "The effect of loan to deposit ratio (LDR) on return on assets (ROA) at PT. Bank Mandiri Persero, Tbk"

METHOD

The research location is the object that is the focus of the research. In this research, the research location is PT. Bank Mandiri (Persero) Tbk. This research was conducted for three months starting from October to December 2021. The type of research used was associative research. Associative research is a study that aims to determine the relationship between two or more variables, so there are independent variables (influenced variables) and dependent (influenced) variables. This study consists of the independent variable, namely Loan to Deposit Ratio (X) and the dependent variable in this study is Return On Assets (Y). Many institutions store their data on servers that can be accessed via the internet, such as www.idx.co.id which is a summary of financial data and stock developments from all issuers in the capital market and company websites that provide a lot of information about the company.Result and Discussion.

RESULT AND DISCUSSION

1. Simple Linear Regression Test

The effect of loan to deposit ratio on return on assets at PT. Bank Mandiri (Persero) Tbk. To determine this effect, simple linear regression is used where the data used as the dependent variable is return on assets (ROA), while the independent variable is the loan

to deposit ratio (LDR) which is managed by simple regression data, the data needed are as follows:

Table 1
Calculation of simple linear regression PT. Bank Mandiri (Persero) Tbk.

Years	X	Y	XY	X^2	Y^2
2016	89	2	178	7.921	4
2017	90	2	180	8.100	4
2018	95	3	285	9.025	9
2019	95	3	285	9.025	9
2020	85	2	170	7.225	4
∑	454	12	1.098	41.296	30

Source: Data processed, 2021

$$b = \frac{n\,(\sum XY) - (\sum x)(\sum y)}{n\,(\sum x2) - (x)2}$$

$$b = \frac{5(1.098) - (454)(12)}{5(41.296) - (454)^2}$$

$$b = \frac{(5.490) - (5.448)}{(206.480) - (206.116)}$$

$$b = \frac{42}{364}$$

$$b = 0{,}115$$

Based on the results of the regression coefficient (b) above, the constant value (a) can be calculated using the following mathematical formula:

$$a = \frac{(\sum Y)(\sum X^2) - (\sum X)(\sum XY)}{n(\sum x^2) - (\sum X)^2}$$

$$a = \frac{(12)\,(41.296) - (454)\,(1.098)}{5\,(41.296) - (454)^2}$$

$$a = \frac{495.552 - 498.492}{206.480 - 206.116}$$

$$a = \frac{(\,-2.940)}{364}$$

$$a = -\,8{,}077$$

Thus the simple linear regression equation is as follows:

$$y = -\,8{,}077 + 0{,}115X$$

Thus, the simple linear regression equation Y = (-8.077) + 0.115X based on this equation can be explained as follows:

a. The constant is -8.077, meaning that if the loan to deposit ratio is 0, then the return on assets is (-8.077)
b. The regression coefficient of 0.115 means that every increase of Rp. 1 loan to deposit ratio will increase return on assets by 0.115X

2. Analysis of Correlation Coefficient (r)

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{\{n(\sum x^2) - (\sum x)^2\}\ \{n(\sum y^2) - (\sum y)^2\}}}$$

$$= \frac{5(1.098) - (454)(12)}{\sqrt{\{5(41.296) - (454)^2\}\ \{5(30) - (12)^2\}}}$$

$$= \frac{5.490 - 5.448}{\sqrt{(206.480 - 206.116)\ (150 - 144)}}$$

$$r = \frac{42}{\sqrt{(364)\ (6)}}$$

$$r = \frac{42}{\sqrt{2.184}}$$

$$r = \frac{42}{46{,}733}$$

r = 0,899

The value of r = 0.899 is at 0.80 – 1.000 with a very strong correlation level so it can be concluded that there is a very strong influence between the variables X (loan to deposit ratio) and Y (return on assets).

3. Coefficient of Determination (r^2)

The coefficient of determination is used to determine the effect of variable X (loan to deposit ratio) on variable Y (return on assets) at PT. Bank Mandiri (Persero) Tbk. The value of the correlation coefficient is known, the coefficient of determination can be calculated by the following formula:

r = 0,899

$r^2 = (0{,}899)^2$

$r^2 = 0{,}808$

$r^2 = 80{,}8\%$

The value of the coefficient of determination shows how good the regression model is formed by the interaction of the following variables. The value of the coefficient of determination obtained is 80.8, meaning that the ratio is able to explain changes in the X

variable (loan to deposit ratio) which has an influence of 80.8% on the Y variable (return on assets), then the remaining 19.2% is influenced by other factors. other.

4. Test – t

To prove the hypothesis proposed in this study, a hypothesis test called the t-test was used. This t-test was used to test the significant relationship between loan to deposit ratio and ROA at PT. Bank Mandiri (Persero) Tbk prior to testing, the following steps are taken:

a. Formulate a hypothesis
H0 : = 0, there is no correlation between variables X and Y
Ha : 0, there is a correlation between variables X and Y
b. Determining the value of ttable with a one-way test at the value of alpha (α) = 0.05 = 5% then the value of ttable = 2.353

And to test the hypothesis proposed by the author can be accepted or not. The t test is known by the following formula:

$t_{count} = r\sqrt{\frac{n-2}{1-r2}}$

$t_{count} = 0{,}899\sqrt{\frac{5-2}{1-0{,}808}}$

$t_{count} = 0{,}899 \times 3{,}953$

$t_{count} = 3{,}550$

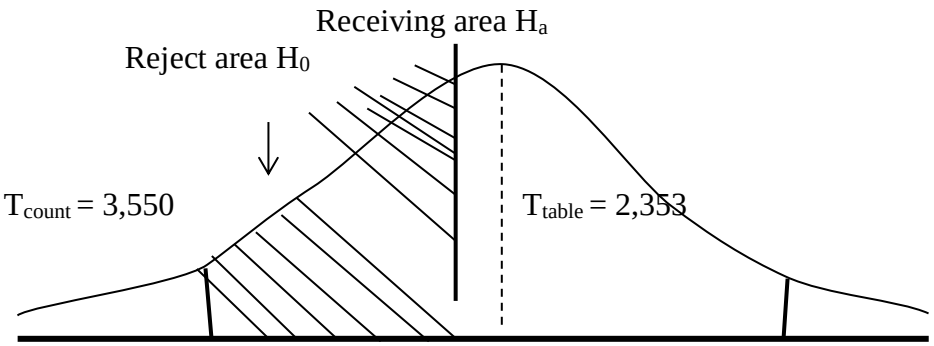
Where before this t test is carried out, first determine the degree of freedom (df). In determining the degree of freedom (df) in this hypothesis test, it is carried out with the following formula:

$$df = n - k$$

Where:
n = annual number
k = number of variables
From this equation, the value of degrees of freedom (df) is obtained as follows:

$$n\text{-}k = 5 - 2$$
$$df = 3$$

In this study using a 1-way test, here is a picture of a significant correlation test with a 1-way test to state the significant value is positive or not.



Source: Data processed, 2021

Figure 1. t test results

Determining the decision by comparing the value of t-table with t-count, it turns out that the value of t-count lies in accepting Ha and rejecting H0, this shows that there is evidence to reject H0 based on the hypothesis criteria for the value of the t-table (3.550 2.353) so that it rejects H0 and accept Ha means that there is a significant influence between loan to deposit ratio (LDR) on return on assets (ROA) at PT. Bank Mandiri (Persero) Tbk.

Discussion

The research results are based on the suitability of the theory, as well as previous research that has been stated previously. The following main sections are discussed based on the results of research at PT. Bank Mandiri (Persero) Tbk. as follows: The results of the partial test show that LDR to ROA obtained t-count for the LDR variable of 3.550 while the t-table is 2.353 or t-count > t-table (3.550 > 2.353) with a positive direction. Significant LDR 0.038 < 0.05. This shows that the higher the LDR value obtained by the company, the company's ROA will also increase. So it can be concluded that the hypothesis H0 is rejected and Ha is accepted. This means that the Loan to Deposit Ratio variable has a significant positive effect on Return On Assets. This research is also strengthened by the research results of (Raharjo & Haryanto, 2015; Siregar & Dewi, 2019) explains that the Loan to Deposit Ratio (LDR) has a positive and significant effect on Return On Assets (ROA). This means that the higher the LDR, the higher the level of company profits because the placement of funds in the form of loans is increasing, so that interest income will also increase. Vice versa, the lower the LDR, the lower the company's profit level because the placement of funds in the form of loans disbursed decreases, so that interest income decreases as well.

CONCLUSION

Based on the results of the analysis and discussion, it can be concluded about this research, namely the influence of Loan to Deposit Ratio (LDR) on Return On Assets (ROA) at PT. Bank Mandiri (Persero) Tbk. By performing the analysis method using simple linear regression, namely y = -8.077 + 0.115x, then the correlation coefficient (r) is 0.889, this shows a very strong relationship between loan to deposit ratio and return on assets, the coefficient of determination (r2) is 0.808, this shows that the variable x has an influence of 80.8% on the variable y. The results of the t-test data obtained t-count of 3.550 because t-count = 3.550 t-table 2.353, it can be seen that the loan to deposit ratio has a significant effect on return on assets. This shows that the hypothesis proposed by the researcher is accepted.

REFERENCES

Akib, H., Jamaluddin, J., Taddampali, A. C. T., & Guntur, N. (n.d.). Application of The Situasional Leadership Style in PT. Bank Negara Indonesia (PERSERO) TBK, Mattoangin Branch Office Makassar. *Pinisi Business Administration Review*, *3*(2), 149–156.

Campanella, F., Del Giudice, M., Thrassou, A., & Vrontis, D. (2020). Ambidextrous organizations in the banking sector: an empirical verification of banks' performance and conceptual development. *The International Journal of Human Resource Management*, *31*(2), 272–302.

Cetorelli, N., & Goldberg, L. S. (2011). Global banks and international shock transmission: Evidence from the crisis. *IMF Economic review*, *59*(1), 41–76.

Collier, P. (2000). *Economic causes of civil conflict and their implications for policy* (Vol. 5). Citeseer.

Diamond, D. W., & Rajan, R. G. (2001). Banks, short-term debt and financial crises: theory, policy implications and applications. *Carnegie-Rochester conference series on public policy*, *54*(1), 37–71.

Du, J., Love, J. H., & Roper, S. (2007). The innovation decision: An economic analysis. *Technovation*, *27*(12), 766–773.

Hudjir, M., Suhartono, S., Prasetyawati, E., & Setyadji, S. (2021). Essence bank guarantee in procurement of government goods/services. *Technium Social Sciences*

Journal, *20*, 371–376.

Leccis, F. (2019). Regeneration programmes: Enforcing the right to housing or fostering gentrification? The example of Bankside in London. *Land Use Policy*, *89*, 104217. https://doi.org/https://doi.org/10.1016/j.landusepol.2019.104217

Raharjo, A. M., & Haryanto, A. M. (2015). Analisis pengaruh eva, roa, der, volume perdagangan dan kapitalisasi pasar terhadap harga saham (studi pada perusahaan umum yang terdaftar di BEI tahun 2011-2013). *Diponegoro Journal of Management*, 674–684.

Ramos, C. M. Q., & Casado-Molina, A.-M. (2021). Online corporate reputation: A panel data approach and a reputation index proposal applied to the banking sector. *Journal of Business Research*, *122*, 121–130. https://doi.org/https://doi.org/10.1016/j.jbusres.2020.08.061

Revualu, V. V., Ngampo, M. Y. A., & Sahade, S. (2018). *Pengaruh Tingkat Suku Bunga Bank Indonesia Terhadap Harga Saham Pada Perusahaan Pertambangan Yang Terdaftar Di Bursa Efek Indonesia*. Universitas Negeri Makassar.

Schnellenbach, J. (2007). Public entrepreneurship and the economics of reform. *Journal of Institutional Economics*, *3*(2), 183–202.

Siregar, R., & Dewi, A. (2019). Analysis of the effect of fundamental financial ratio of ROA, DER, CR, TATO, and PBV on stock return of plantation sub-sector industry at IDX 2014-2017. *International Journal of Innovative Science and Research Technology*, *4*(7), 405–414.

Sobiech, A. L., Chronopoulos, D. K., & Wilson, J. O. S. (2021). The real effects of bank taxation: Evidence for corporate financing and investment. *Journal of Corporate Finance*, *69*, 101989. https://doi.org/https://doi.org/10.1016/j.jcorpfin.2021.101989

Tadampali, A. C. T., Hadi, A., & Salam, R. (2016). Pengaruh Iklim Organisasi terhadap Turnover Intention Melalui Kepuasan Kerja sebagai Variabel Intervening pada PT Bank SulSelBar. *Jurnal Ilmiah Ilmu Administrasi Publik*, *6*(2), 35–46.