Almana : Jurnal Manajemen dan Bisnis
Volume 5, No. 2/ August 2021, p. 222-227
ISSN 2579-4892 print/ ISSN 2655-8327 online
DOI: 10.36555/almana.v5i2.1577

ANALYSIS OF NET INTEREST MARGIN (NIM) AND RETURN ON ASSETS (ROA)

Ajeng Ayu Wardhani Putri*[1], Nor Norisanti[2], Faizal Mulia Z[3]
Universitas Muhammadiyah Sukabumi, Indonesia*[123]
ayuajeng439@ummi.ac.id[1], nornorisanti@ummi.ac.id[2], faizal_88@ummi.ac.id[3]

Abstract: In 2018 the banking sector experienced a very fast expansion resulting in a decrease in the Capital Adequacy Ratio (CAR) at the level of 22.01% compared to 2017, namely 22.75%. Growth in risk-weighted assets (RWA) was the cause of the decline in the value of the Capital Adequacy Ratio (CAR) which can be influenced by aspects of financial performance, one of which is the profitability aspect of Net Interest Margin (NIM) and Return On Assets (ROA). This study aims to determine the effect of Net Interest Margin (NIM), Return On Assets (ROA) on the Capital Adequacy Ratio (CAR) in 31 private banks listed on the Indonesia Stock Exchange (IDX). The method used is multiple linear regression analysis using IBM SPSS 24. Based on the results of the study showed a significant influence between Net Interest Margin (NIM), Return On Assets (ROA) on the Capital Adequacy Ratio (CAR) together (simultaneously).
Keywords: CAR, NIM, ROA

INTRODUCTION

Today the banking world is growing rapidly, so bank management must be able to innovate according to the times so that they can compete and survive in the banking world. The key to the success of a bank lies in the management of the bank itself. One of the main indicators based on an assessment is the bank's financial performance, seen from the financial reports that show financial conditions. According to Fernando & Dewi (2019) In essence, the Bank is a place to collect and channel funds and function as a financial institution, and the Bank is no longer limited to collecting and distributing public funds, the Bank also plays an important role in an increasingly developing era, namely in the country's economy by contributing to the world of business and business.

The level of banking performance is a very important measure of the bank's internal financial performance. And one of the bank's performances, namely to measure capital adequacy is an important aspect. Capital structure is an important part of the financial decision-making process because the capital indicator has a reciprocal relationship to the decisions of other financial variables.

There is a capital indicator on bank financial performance through the Capital Adequacy Ratio (CAR). According to Almunawwaroh & Marlina (2018), *Capital Adequacy Ratio (CAR)* is capital adequacy which shows the bank's ability to maintain capital and bank management in controlling risks that arise and can affect capital, providing a minimum capital of 8% of RWA. Capital Adequacy Ratio (CAR) shows a bank's ability to provide funds to develop a business and can accommodate possible risks caused by bank operations, with the larger the ratio, the better the company's capital. According to Bank Indonesian Circular No.6 / 23 / DPNP (2004):

$$\text{CAR} = \frac{Capital}{(ATMR)} \times 100\%$$

In 2018 the banking sector experienced a very fast expansion resulting in a decrease in the Capital Adequacy Ratio (CAR) at the level of 22.01% compared to 2017, namely 22.75%. The growth of risk-weighted assets (RWA) is the cause of the decline in the value of the Capital Adequacy Ratio (CAR). Risk-weighted assets (RWA) in 2018 were 11.1% YoY while the new capital was 7.5% YoY.

Submitted: March 06, 2021; Revised: July 27, 2021; Accepted: July 28, 2021;
Published: August 16, 2021; Website: http://journalfeb.unla.ac.id/index.php/almana

Almana : Jurnal Manajemen dan Bisnis
Volume 5, No. 2/ August 2021, p. 222-227
ISSN 2579-4892 print/ ISSN 2655-8327 online
DOI: 10.36555/almana.v5i2.1577

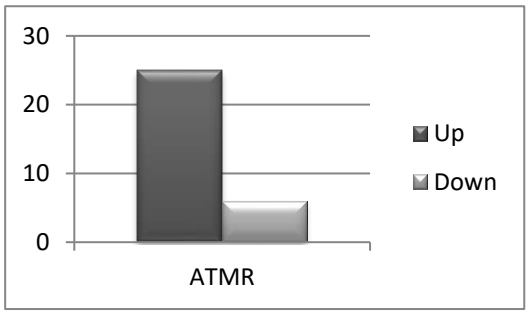
The size of the Capital Adequacy Ratio (CAR) owned by a bank will be influenced by aspects of financial performance, one of which is the profitability aspect of Net Interest Margin (NIM) and Return On Assets (ROA). According to Julaeha (2015) Net Interest Margin (NIM) that is, it reflects the market risk that can harm the bank if the amount of NIM can affect the bank's profit and loss which affects the bank's performance. Meanwhile, according to Dewi (2018), Net Interest Margin (NIM) is the ratio used to measure a bank's ability to generate net interest income on large processing of productive assets. Eng (2013) and Umar (2016) show that Net Interest Margin has a significant positive effect on Return On Assets. According to the Rules Bank Indonesian, (2004):

$$\text{NIM} = \frac{\text{Net interest income}}{\text{Average Total Earning Assets}} \times 100\%$$

Return On Assets (ROA) affects the soundness level of the bank and one of the health levels is the Capital Adequacy Ratio (CAR). That Harianto's (2017) Return On Asset (ROA) ratio to measure the bank's ability to earn an efficient overall profit. According to Kasmir (2014) Return On Total Assets (ROA) or known as Return On Investment (ROI), a ratio that shows the results (return) on the total assets used in the company and this ratio is also to measure the effectiveness of management in investment management. The smaller (lower) the Return on Assets (ROA) ratio, the less good company management, and vice versa. Rivai (2013) explains that Return On Assets is the company's ability to utilize its assets to earn a profit. This ratio measures the rate of return on investment that has been made by the company using all the funds (assets) it has. This ratio can be compared with the prevailing bank interest rate. According to the Rules Bank Indonesian (2004):

$$\text{ROA} = \frac{\text{Profit before tax}}{\text{Average Total Assets}} \times 100\%$$

Table 1. Fluctuation of Risk-Weighted Assets (RWA)



Source: IDX.co.id (2020)

With the increase in the RWA value of 31 private banks studied by researchers, there were 25 private banking ATMRs that had increased and 6 experienced an increase in 2018. So based on the description above, the researcher has conducted research on private banks listed on the Indonesia Stock Exchange with the title "Analysis of Net Interest Margin (Nim) Return On Assets (ROA) on Capital Adequacy Ratio (CAR) Case Study of Private Banking Listed on the Indonesia Stock Exchange".

Submitted: March 06, 2021; Revised: July 27, 2021; Accepted: July 28, 2021;
Published: August 16, 2021; Website: http://journalfeb.unla.ac.id/index.php/almana

Almana : Jurnal Manajemen dan Bisnis
Volume 5, No. 2/ August 2021, p. 222-227
ISSN 2579-4892 print/ ISSN 2655-8327 online
DOI: 10.36555/almana.v5i2.1577

METHODS

This research method uses descriptive, associative, and horizontal quantitative methods with the object of research under study, namely the analysis of the financial performance of 31 private banks listed on the Indonesia Stock Exchange (IDX) for the 2017-2018 period regarding Net Interest Margin (NIM) and Return On Assets (ROA).

Data collection techniques used by researchers are secondary data using documentation/collection data collection techniques

Researchers also used multiple correlation coefficient data analysis techniques, linear regression analysis simple, linear regression analysis multiple, coefficient of determination, and hypothesis testing.

RESULTS AND DISCUSSION

Multiple Correlation Coefficient

Multiple correlation coefficients are used to measure the relationship between Net Interest Margin (NIM), Return On Assets (ROA), and Capital Adequacy Ratio (CAR) (Sugiyono, 2017), test results using IBM SPSS Statistics 26 can be seen in the table below:

Table 2. Multiple Correlation Coefficient

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate	Change Statistics			
					R Square Change	F Change	df1	df2	Sig. F Change
1	.574[a]	.330	.282	5.84889	.330	6.883	2	28	.004

a. Predictors: (Constant), ROA, NIM

Source: Researcher data (2020)

The results of the table above produce multiple correlation coefficient values, namely 0.574 (can be seen from the R-value) and are located between 0.4- 0.599 which indicates a moderate relationship between Net Interest Margin (NIM) and Return On Assets (ROA) on the Capital Adequacy Ratio (CAR).

Coefficient of Determination

Table 3. Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.574[a]	.330	.282	5.84889

a. Predictor: (Content), ROA, NIM

Source: Researcher data (2020)

The results of the table above show that the Adjusted R Square value is 0.330 as the coefficient of determination. That is, (KD = 0.330 × 100% = 33%) and the location is 100% - 33% = 67% influenced by another variable.

Simple Regression Analysis

Simple Linear Regression Analysis is to see the relationship of each variable (x) on the variable (y) whether there is a positive or negative relationship (Sugiyono, 2017).

Submitted: March 06, 2021; Revised: July 27, 2021; Accepted: July 28, 2021;
Published: August 16, 2021; Website: http://journalfeb.unla.ac.id/index.php/almana

Almana : Jurnal Manajemen dan Bisnis
Volume 5, No. 2/ August 2021, p. 222-227
ISSN 2579-4892 print/ ISSN 2655-8327 online
DOI: 10.36555/almana.v5i2.1577

Table 4. Simple Linear Regression Analysis

Model		Coefficients Unstandardized B	Coefficients 8td. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	14.686	2.277		6.451	.000
	NIM	1.624	.443	.575	3.709	.001
	ROA	-0.93	.575	-.025	-.163	.872
Dependent Variable: CAR						

Source: Researcher data (2020)

The results from the table above the relationship between Net Interest Margin (NIM) on the Capital Adequacy Ratio (CAR), which produces a positive effect with a constant number of 14,686 and a simple linear regression coefficient of 1,624 (Y '= 14,686 + 1,624). And for the relationship between Return On Assets (ROA) on the Net Interest Margin, it has a negative effect with the results of the SPSS value, namely the constant value of 14,686 and the simple linear regression coefficient value of -0.93 (Y '= 14,686 - 0.93).

Multiple Linear Regression Analysis

Multiple linear regression analysis is to see the positive/negative relationship between the variable (x) Net Interest Margin (NIM), Return On Assets (ROA) on the variable (y) Capital *Adequacy Ratio* (CAR) (Sugiyono, 2017).

Table 5. Multiple Linear Regression Analysis

Model		Coefficients Unstandardized B	Coefficients 8td. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	14.686	2.277		6.451	.000
	NIM	1.624	.443	.575	3.709	.001
	ROA	-0.93	.575	-.025	-.163	.872
4.	Dependent Variable: CAR					

Source: Researcher data (2020)

From the table above that:

Y = 14,686 + 1,624 + (-0.93)

It shows a positive influence on the relationship between Net Interest Margin (NIM) on the Capital Adequacy Ratio (CAR) and there is a negative influence on the relationship between Return On Assets (ROA) on the Capital Adequacy Ratio (CAR).

T-test

Table 6. T-Test

Model		Coefficients Unstandardized B	Coefficients 8td. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	14.686	2.277		6.451	.000
	NIM	1.624	.443	.575	3.709	.001
	ROA	-0.93	.575	-.025	-.163	.872
4.	Dependent Variable: CAR					

Source: Researcher data (2020)

Submitted: March 06, 2021; Revised: July 27, 2021; Accepted: July 28, 2021;
Published: August 16, 2021; Website: http://journalfeb.unla.ac.id/index.php/almana

Almana : Jurnal Manajemen dan Bisnis
Volume 5, No. 2/ August 2021, p. 222-227
ISSN 2579-4892 print/ ISSN 2655-8327 online
DOI: 10.36555/almana.v5i2.1577

The results of the table show that the T-test for Net Interest Margin (NIM) on the Capital Adequacy Ratio (CAR) is 3,709 with a sig. 0.001, then it can be interpreted (H_0 is accepted if tcount>t table), namely, 3.709> 2.048. And T-Test Return On Assets (ROA) on Capital Adequacy Ratio (CAR) as big as -0.163 with a sig. 0.872 then it can be interpreted (H_0 rejected when $-t_{count} < -t_{table}$) that is, -0.613 < - 2,048.

F test

Table 7. F-Test

ANOVA						
Model		**Sum of Squares**	**of**	**Mean Square**	**F**	**Sig.**
1	Regression	470.917	2	235.458	6.883	.004[b]
	Residual	957.867	28	34.201		
	Total	1428.784	30			
a. Dependent Variable: CAR						
b. Predictors: (Constant), ROA, NIM						

Source: Researcher data (2020)

The table results show that the simultaneous test between Net Interest Margin (NIM) and Return On Assets (ROA) on the Capital Adequacy Ratio (CAR) produces an F count of 6.883 and sig. 0.004 and the F table value of 3.34, therefore (H_0accepted when $\mathrm{F}_{count} > \mathrm{F}_{table}$) that is, 6.883 > 3.34.

CONCLUSION

Based on the research results, the Net Interest Margin (NIM) ratio has a significant effect on the Capital Adequacy Ratio (CAR). And the Return on Assets (ROA) ratio has no significant effect on the Capital Adequacy Ratio (CAR). And the ratio of Net Interest Margin (NIM) and Return on Assets (ROA) together (simultaneously) has a significant effect on the Capital Adequacy Ratio (CAR.).

REFERENCES

Almunawwaroh, Medina., & Marlina, Rina. (2018). Pengaruh CAR, NPF, dan FDR terhadap Profitabilitas Bank Syariah di Indonesia. *Amwaluna*, *2*(1), 1-17, https://doi.org/10.29313/amwaluna.v2i1.3156

Bank Indonesia. (2004). *Surat Edaran Bank Indonesia Nomor 6/23/DPNP Perihal Sistem Penilaian Tingkat Kesehatan Bank*. Retrieved from www.bi.go.id

Dewi, M. (2018). ANALISIS TINGKAT KESEHATAN BANK DENGAN MENGGUNAKAN PENDEKATAN RGEC (RISK PROFILE , GOOD CORPORATE GOVERNANCE , EARNINGS , CAPITAL) (STUDI PADA PT . BANK RAKYAT INDONESIA , TBK. *Niagawan, 7*(3), 125–143. https://doi.org/10.24114/niaga.v7i3.11602

Eng, Tan Sau. (2013). Pengaruh NIM, BOPO, LDR, NPL, dan CAR Terhadap ROA Bank Internasional dan Bank Nasional Go Public Periode 2007- 2011. *Jurnal Dinamika Manajemen*, *1*(3), 153- 167.

Fernando, R., & Dewi, A. S. (2019). *Pengaruh CAR, BOPO, NPL, NIM, dan LDR terhadap ROA Pada Perusahaan di Sektor Perbankan Yang terdaftar di BEI Periode 2012-2016.* https://doi.org/10.31219/OSF.IO/K3W69

Harianto, Syawal. (2017). Rasio Keuangan dan Pengaruhnya terhadap Profitabilitas pada Bank Pembiayaan Rakyat Syariah. *Esensi: Jurnal Bisnis dan Manajemen, 7*(1), 41–48. https://doi.org/10.15408/ess.v7i1.4076

IDX.co.id. (2020). Fluktuasi Aktiva Tertimbang. https: //www.idx.co.id

Submitted: March 06, 2021; Revised: July 27, 2021; Accepted: July 28, 2021;
Published: August 16, 2021; Website: http://journalfeb.unla.ac.id/index.php/almana

Julaeha, Lia. (2015). Pengaruh Non Performing Loan, Net Interest Margin, Biaya Operasional/Pendapatan Operasional dan Loan to Deposit Ratio terhadap Profitabilitas Bank (Study Kasus Bank Rakyat Indonesia, Tbk Periode 2003-2014). *Jurnal Ekonomi Bisnis, 20*(3).

Kasmir, D. (2014). *Manajemen Perbankan*. Jakarta: PT. Raja Grafindo Persada.

Rivai, Veithzal. (2013). *Commercial Bank Management: Manajemen 11 Perbankan dari Teori ke Praktik, edisi 1, cetakan 1*. Jakarta: Rajawali Pers

Sugiyono. (2017). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: CV Alfabeta.

Umar, Rifqi., & Khairunisa. 2016. Analisis Pengaruh Dana Pihak Ketiga (DPK) dan Net Interest Margin (NIM) terhaap Return on Assets (ROA) pada Bank yang Terdaftar di Bursa Efek Indonesia Tahun 2010-2014. *E-Proceding of Management*, *3*(2).

Submitted: March 06, 2021; Revised: July 27, 2021; Accepted: July 28, 2021;
Published: August 16, 2021; Website: http://journalfeb.unla.ac.id/index.php/almana