



Determinants Profitability Of 10 Top Banks In Indonesia Using Eagles

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This study aims to identify the determinants of profitability of the 10 largest banks in Indonesia over 10 years (2010 to 2019). These 10 banks were selected because they are the beacon of health to the national banking sector and the economy. The EAGLES framework was applied to the analysis. A multiple regression equation was formulated using SPSS software to analyze the strength of correlation of nine independent financial indicators to the dependent variable, return of assets (ROA). These financial indicators are listed as Non-Performing Loan (NPL), Non-Performing Loan Growth (NPLG), Loan Growth (LG), Deposit Growth (DG), Staff Cost Growth (SCG), Loan Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), Net Interest Margin (NIM), and Net Interest Margin / Net Operating Cost (NIM-NOC). The analysis found four independent financial indicators that are statistically significant as having a strong association with the ROA. The contribution of the finding is that the Indonesian banks can be guided to focus on these four indicators on their management dashboard to steer their profitable growth. Another contribution is that the central bank authorities can also be informed of these same indicators as a tool to manage the safety of the Indonesian banking sector.

Keywords: Strategic Response Quotient, SRQ, Bank Strategy, Return on Assets, ROAs, CAMEL, Financial Institutions in Distress.

OPEN ACCESS

ISSN 2528-4649 (online)

ISSN 2338-4409 (print)

Reviewed by:

Prof. Dr. Anis Eliyana, SE., M.Si.

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Received: November 27, 2020

Accepted: February 25, 2021

diterima Published: March 31, 2021

JBMP: Jurnal Bisnis, Manajemen dan

Perbankan.

Vol: 7/ No. 1

doi: 10.21070/jbmp.v7i1.1283

INTRODUCTION

The banking industry is one of the most highly regulated industries in the world. However, despite the tight regulations by central banking authorities and regulators, there are still bank failures over the past 30 years. Bank regulations are drawn up in accordance with domestic and international standards adopted from the Basel Committee development standards. The regulation requires minimum capital adequacy so as to increase the buffer in its capital structure to improve bank liquidity and stability and allows the bank to grow its assets, or to prevent failure from rising non-performing loans (Bank for International Settlements, 2018). These regulations are administered by central banks and regulatory authorities and, as Barth, Caprio & Levine (2013) found, are substantially heterogeneous across 180 countries. Even though banks already have many binding regulations, bank supervision is of great importance.

Currently in Indonesia, there are more than 150 banks, causing tight competition between them. However, it is necessary to assess whether all banks in Indonesia have good financial performance. With a deluge of banks in Indonesia, all seeking to grow rapidly, the government should provide policies and standards for in-depth bank supervision. As a central bank and supervisor of banking activities, the CAMEL (Capital, Assets, Management, Earnings, Liquidity) approach is used by Bank Indonesia as a measurement tool for bank soundness in accordance with SE no. 26/5/BPPN tanggal 26 Mei 1993 dan SK BI no. 30/11/KEP/DIR tanggal 30 April 1997.

Because CAMEL has become a standard reference for Bank Indonesia (BI), in this study researchers wish to use the EAGLES approach, which is rarely used in Indonesia in examining factors that affect profitability. Vong (1997) founded a new approach in measuring banking performance using the Earning Ability ratio; Assets Quality Ratio; Growth Rate; Liquidity; Equity; and Strategy Response Quotient, to which he gave an acronym, EAGLES. This approach is considered more objective than the CAMEL, because of the EAGLES applies the ratios as a rating method, not scoring method of between 1 to 5 as in CAMEL.

The purpose of this study is to determine whether Non-Performing Loan (NPL), Non-Performing Loan Growth (NPLG), Loan Growth (LG), Deposit Growth (DG), Staff Cost Growth (SCG), Loan Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), Net Interest Margin (NIM), and Net Interest Margin/Net Operating Cost (NIM/NOC) significantly affect bank profitability in Indonesia in 2010-2019.

METHOD (FOR RESEARCH ARTICLE)

This is a quantitative research with a descriptive approach. Based on the opinion of Sugiyono (2013: 13), quantitative research methods can be interpreted as a research method based on the philosophy of positivism, used in conducting research on a sample or population, sampling techniques are generally made randomly. In collecting data using research instruments, statistical / quantitative data analysis in order to

test the predetermined hypothesis. This study uses a descriptive approach that aims to provide a description of the research results or research objects. This study uses a multiple linear regression test to determine the determinants of banking profitability in Indonesia. There are several stages to carry out this research, namely giving assumptions on the independent and dependent variables and those used, by means of statistical tests, analyzing the results of multiple linear regression tests, and testing the F test and interpreting the results of the analysis.

[Table 1 about here]

By applying the EAGLES analysis framework, this study will test the hypothesis that Non-Performing Loan (NPL), Non-Performing Loan Growth (NPLG), Loan Growth (LG), Deposit Growth (DG), Staff Cost Growth (SCG), Loan Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), Net Interest Margin (NIM), and Net Interest Margin/Net Operating Cost (NIM/NOC) affect the profitability of banks in Indonesia in 2010-2019.

RESULTS AND DISCUSSION

In accordance with the test results, it shows the EAGLES indicator, that is, partially, not all variables have an influence on bank profitability as represented by ROA (Return on Asset). There are five variables that does not have statistically significant correlation on Return On Asset (ROA), including, Non-Performing Loan Growth (NPLG), Non-Performing Loan (NPL), Capital Adequacy Ratio (CAR), Deposit Growth (DG), and Staff Cost Growth (SCG). The 4 variables that have a statistically significant influence on Return On Assets (ROA) are Loan Growth (LG), Loan Deposit Ratio (LDR), Net Interest Margin (NIM), and Net Interest Margin/Net Operating Cost (NIM/NOC).

[Table 2 about here]

It is shown by the significance value of NPL (Non-Performing Loan) of 0.125 with a coefficient value of -0.161 or -16.1%. If Non-Performing Loans (NPL) increases, it means that the quality of bank credit is declining. In this case, there is a possibility that banks in Indonesia will face a higher risk of default if they have a high and growing NPL (Non-Performing Loan).

The Non-Performing Loan Growth (NPLG) in this study also showed that it is not statistically significant in influencing bank profitability because it has a coefficient value of 0.000 or 0% and at a significance value of 0.708. If the Non-Performing Loan Growth (NPLG) increased, there will be a lower ROA. It is estimated that a high NPL level causes bank profits to

decrease substantially. The research showed that Deposit Growth (DG), has a significance value of 0.084 and a coefficient (-0.016) or (-1.6%). The study of Dietrich et al. (2011) explains that deposit growth (DG) has a negative effect on bank profits because the benefits of higher deposit growth are related to the quality of credit management. In addition, in his research, there is no statistical evidence that the growth rate of deposits affects bank profitability.

With the results of research showing a significance value of 0.204 with a coefficient value of 0.008 or 0.8%, Staff Cost Growth (SCG) has different results from the initial hypothesis. The initial hypothesis states that Staff Cost Growth (SCG) has an influence on ROA, but the results found that partially Staff Cost Growth (SCG) has no effect on ROA. This is inversely proportional to research that has been done previously by Abertazzi, U. et. Al. (2009) where it is explained that a reduction in Staff Cost Growth (SCG) brings about an increase in ROA.

It was found that Capital Adequacy Ratio (CAR) has no effect on ROA as indicated by a significance value of 0.867 with a coefficient value of -0.004 or -0.4%. This is similar to Munir's research (2018) that states that CAR does not have a significant effect in the study period. It can be caused by the attitude of banking management which maintains that the level of Capital Adequacy Ratio (CAR) in Islamic banking remains in accordance with the compliance determined by the central bank (BI).

Meanwhile, the Loan Deposit Ratio (LDR) has a negative effect on ROA as indicated by a significance value of 0.06 with a coefficient value of -0.023 or -2.3%. The research of Oktavianus (2016), it was found that the LDR variable has a significant negative effect on profitability because t is below 0.001.

Thus it can be interpreted that LDR has a negative effect on ROA because:

The higher the LDR, the lower the ROA. This has an inverse relationship.

The higher the LDR, the bank is actively providing loans. It can be said that the greater the distribution of loans (high loans), the higher the likelihood of bad credit occurring.

The higher the level of bad credit (reflected in a higher LDR), will lead to lower profitability.

The Net Interest Margin (NIM) on ROA is indicated by a significance value of 0.000 with a coefficient value of 0.22 or 22%. The research of Menicucci (2016) and Hayati & Musdholifa (2014) states that NIM is part of a measure of profitability. So it can be explained that in the results of the study, Net Interest Margin (NIM) has a positive effect on ROA. We assume ROA is calculated as Net Profit before tax divided by Total Assets. Net interest margin (NIM) can be expressed as a percentage (%), and is calculated as (interest income less interest expense) divided by (Total Customer Loans).

Interest income is obtained from bank loans multiplied by the loan interest rate. However, banks can only provide loans if they have customer deposits. To get customer deposits, banks must pay interest costs on customer deposits. So it can be concluded that the higher the Net interest margin (NIM), the higher the profitability (expressed as % ROA).

In the computed regression model, NIM has a positive relationship with ROA. This is true because higher NIM% means higher net interest income and profitability (ROA%).

Furthermore, Net Interest Margin/Net Operating Cost (NIM/NOC) on ROA is indicated by a significance value of 0.000 with a coefficient value of 0.84 or 84%, NIM/NOC is positively correlated with ROA assuming ROA is calculated as Net Profit before tax divided by Total Assets. This finding agrees with the research of Vong (1995), Vong and Song (2015), and Dang and Vong (2020) that the ratio is called the Strategy Response Quotient (SRQ). In general, this ratio measures how the bank strategically responds to the market in lending, saving deposits, new product innovation and cost control. Usually it has a positive relationship with return on assets (ROA). To understand the importance of NIM/NOC, it is necessary to understand their meaning. NIM can be expressed as a percentage (%) by taking Interest Income less Interest Expenses and dividing the Total Loan. NIM can also be expressed as IDR currency, in this case it is called net interest income. NOC is the result of Operational Costs minus Fee Based Income (meaning income other than interest income). The NIM divided by the NOC is the coverage ratio, which is the number of times the NIM can cover the NOC. If the NIM cannot cover the NOC, the bank will have a Negative Profit (Loss). So, the more NIMs cover the NOC, the higher the bank's profit as expressed by the ROA. In the computed regression model, NIM/NOC is positively correlated with ROA. This is true, because the higher the NIM/NOC, the higher the ROA.

Finally, the Loan Growth (LG) on ROA indicated by a significance value of 0.04 with a coefficient value of 0.21 or 21%. Research conducted by E. Kohlscheen et.al (2018) explains that the positive coefficient on bank loan growth shows that risk-making decisions affect profitability. So for this study the loan growth (LG) variable has a positive correlation with ROA which is calculated as Net Profit before tax divided by Total Assets. Loan growth (LG) is expressed as a percentage (%). To determine the annual rate of increase (%) or decrease (%) of bank loans, it is calculated as: Total Loans this year minus Total Loans last year's divided by Total Loan last year. As we have previously stated, the main source of bank income is interest income from bank loans (calculated by taking the Rupiah amount of the bank loan multiplied by the bank loan interest rate). To get Net Profit (expressed as ROA%), the Interest Income minus Interest Costs, and further minus Net Operating Costs. So, this means that the higher the Loan Growth (LG), the higher the Net Profit (as long as the interest costs and operating costs are fixed). In the calculated regression model, Loan Growth (LG) is positively correlated with ROA%. This is rational, because the higher the credit growth, the higher the profit (expressed as ROA), as long as interest costs and operating costs remain constant.

[Table 3 about here]

Testing using the Simultaneous Test (Test F) is carried out to see and reveal all independent variables that are simultaneously variables Non Performing Loan Growth (NPLG), Non Performing Loan (NPL), Loan Growth (LG), Deposit Growth (DG), Staff Cost Growth (SCG), Loan Deposit Ratio (LDR), Net Interest Margin (NIM), Capital Adequacy Ratio (CAR), and Net Operating Cost (NIM-NOC) / Net Interest Margin affects the dependent variable, namely bank profitability represented by Return on Assets (ROA) at 10 banks. So that the test method can be used to determine whether the model is fit or not.

From the results of the SPSS calculation, the F count is $38.338 > 2.00$, or the Sig. worth $0.000 < 0.05$. So it can be concluded that 9 independent variables which include NIM, NPL, CAR, LDR, NIM / NOC, LG, DG, SCG, and NPLG simultaneously affect bank profitability represented using Return On Assets.

CONCLUSION

Based on the EAGLES analysis, it can be concluded that of the nine possible identified factors of bank profitability over a 10-year period of the major 10 banks in Indonesia, only four are found to be statistically significant. The four factors are Loan Deposit Ratio (LDR), Net Interest Margin (NIM), Net

Interest Income Margin/Net Operating Cost (NIM/NOC), and Loan Growth (LG). The other five factors are not statistically significant because they have a coefficient value close to zero. They are Non Performing Loans (NPL), NPL Growth, Deposit Growth (DG), Staff Cost Growth (SCG), and Capital Adequacy Ratio (CAR). So it is expected that the banks should focus on the four factors that can significantly affect the ROA so that it can improve financial performance.

ACKNOWLEDGEMENT

Thank you to God Almighty, for all His blessings. Then for father, mother, brothers and sisters, thank you for giving prayers and support in completing this research. Furthermore, I would like to thank Prof. John Vong for providing direction in research. Thank you to Mr. Basith Pahlevi who has been instrumental in the process of writing articles. Thank you to Jack Sean who always gives encouragement and prayers in all conditions. Furthermore, my thanks to best friend A. Rapone who supports me. And finally to all parties who have provided assistance, I would like to say thank you, may God repay all kindness.

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TABLE 1 / Indicator EAGLES

<i>EAGLES</i>	<i>Financial Indicators</i>
<i>Earning</i>	<i>Return on Asset (ROA), Return on Equity (ROE), Interest Margin%, Income to Cost Ratio%</i>
<i>Assets Quality</i>	<i>Non-Performing Loan%, Loans Classification</i>
<i>Growth</i>	<i>Loan Growth%, Deposit Growth%, NPL Growth%, staff cost growth%</i>
<i>Liquidity</i>	<i>Loan to Deposit Ratio%</i>
<i>Equity</i>	<i>Capital Adequacy Ratio%</i>
<i>Strategic Response</i>	<i>Interest Burden, Number of Times Cover</i>

TABLE 2 / Result Calculation of the T-test

Model		Unstandardized Coefficients		Standardized Coefficients	t _{2,2}	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,445	.644		45	.028
	NPL	-.161	.104	-.113	-1,551	.125
	CAR	-.004	.025	-.014	-.168	.867
	LDR	-.023	.008	-.273	-2,824	.006
	NIM	.220	.029	.519	7,708	.000
	NII-NOC	.840	.117	.407	7,201	.000
	NPLG	.000	.001	.020	.376	.708
	DG SCG	-.016	.009	-.129	-1,748	.084
	LG	.008	.006	.072	1,280	.204
		.021	.007	.280	2,993	.004

TABLE 3 / Result Calculate the F-test

Sum of Model		Squares	df	Mean Square	F	Sig.
1	Regression	78,716	9	8,746	38,338	.000 ^b
	Residual	18,250	80	.228		
	Total	96,966	89			

