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## ANALYSIS OF NON PERFORMING LOANS (NPL) AND NET INTEREST MARGIN (NIM) ON THE BANK'S PERFORMANCE BASED ON THE CLASSIFICATION OF BUSINESS ACTIVITIES (BUKU) REGISTERED WITH THE FINANCIAL SERVICES AUTHORITY (OJK) PERIOD 2016 TO 2018

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**ABSTRACT:** The Banking Sector is a very important one for the economic activities of a country that functions as a stabilizer and also supports the economic activity of the real sector by channeling funds to the real sector in the form of working capital loans from sources of funds collected by banks from communities that have excess funds. Therefore bank management must be careful in managing finances so that banks can be said to be healthy and the economic sector will grow. Sources of bank income are from loans disbursed in the form of Net Interest Margin (NIM) which is profit in the banking sector, with a high Net Interest Margin, banks will be healthier, but in lending not all loans are disbursed into the current category, there are some who experience to a loss so that company profits will decline due to bad loans called Non Performing Loans (NPL), so that it affects the bank's performance in terms of its fundamentals, Return on Assets (ROA). Therefore management must pay attention to both of the above. Based on the results of the study found that from banks that are classified based on Bank Core Capital (BUKU) then in BUKU 1 it occurs that NIM has no effect on ROA, this is because banks in BUKU 1 banks with core capital below 1 trillion IDR, then lending to generally to small and medium entrepreneurs and individuals so that it does not take large profits, but NPL has a negative effect on ROA this means that management pays more attention to NPL levels compared to NIMs, because if the NPL increases it will worsen bank performance. On the other hand, NPL BUKU 4 does not affect ROA because banks in BUKU 4 are large banks with capital of more than IDR 30 trillion. They are very free to distribute credit and are generally given to corporations and large companies for investment capital and working capital so that NPL in the short term is not too disturbing bank performance because it already has a high NIM.

#### KEY WORD: NPL, NIM, ROA, BUKU, Bank Performance

#### **INTRODUCTION**

#### **Research Background**

One of the economic drivers of a country is the banking sector which has a strategic and important role because the banking sector connects trade transactions throughout the world through the role of banks in each country. Therefore, the banking sector must be properly maintained so that the level of world confidence in a country is well maintained. In addition, the role of banks in the country is also very important, namely supporting the real sector activities,

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in this case it functions as a mediator between parties who have excess funds and those who need funds. So that the real sector can grow, the impact of a healthy bank is that the inflation rate will be depressed and Gross Domestic Product (GDP) will increase.

In addition, the role of banks in the economy of a nation is vital, namely channeling funds for economic activities so that a healthy bank will strengthen the economic activities of a nation. Conversely economic activities will be unhealthy if the banking sector is not healthy. Eddy Winarso<sup>[1]</sup>. According to Law Number 10 Year 1998 article 1 concerning banking states: "that a bank is a business entity that collects funds from the public in the form of deposits and distributes them to the public in the form of credit and or other forms in order to improve the lives of many people".

According to A. Abdurahman (2012: 2)<sup>[2]</sup> a bank is a type of financial institution that carries out various kinds of services, such as providing loans, circulating currencies, controlling currency, acting as a place to store valuables, to finance business ventures and etc.Based on the description above, the main activity of the bank is to receive deposits from the public who have excess funds in the form of demand deposits, savings, and time deposits and provide credit to those who need funds. The bank functions as a financial intermidary or intermediary for parties with excess funds and those who need funds, besides the bank also functions as an Agent of trust.

Agent of trust, namely the community believes that the money will not be misused by the bank, the money will be well managed and the bank will not go bankrupt (Budisantoso, totok, and Nuritomo, 2014)<sup>[3]</sup>.

The banking sector listed on the Financial Services Authority (OJK) numbered 114 companies <sup>[4]</sup> and among them 45 companies were listed on the Indonesia Stock Exchange (IDX) <sup>[5]</sup>, out of 45 banking sectors listed 1 company had merged in 2018 Bank Antar Daerah, Tbk and Bank of China Construction of Bank Indonesia, Tbk, so that the total number of 44 total registered in the OJK has become 113 banks. In this study banks will be classified based on business activities namely Commercial Banks Business Activities (BUKU) based on Bank Indonesia regulation number 12/26 / PBI / 2012 <sup>[6]</sup> with the following categories:

Commercial Dank Category of Dusiness Activities (DORO)				
Category	Bank Core Capital (in IDR)			
BUKU I	Core Capital > 1 Trillion	Bank Indonesia		
BUKU II	Core Capital > 1 Trillion < 5 Trillion	Regulation number		
BUKU III	Core Capital> 5 Trillion <30 Trillion	14/26/PBI/2012		
BUKU IV	Core Capital> 30 Trillion			

Tabel 1 Commercial Bank Category of Business Activities (BUKU)

Source: <u>https://www.cnnindonesia.com</u> ekonomi/2018032917-858-78-286918/februari-kreditbermasalah-perbankan-benbkak-jadi-rp134-t by Yuli Yana Fauzie (accessed on September 15, 2019) Based on table 1, out of 113 banking companies are classified as follows:

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Table 2					
Commercial Bank Classification					
Category Numbers of Bank					
BUKU I	21 Companies				
BUKU II	59 Companies				
BUKU III	29 Companies				
BUKU IV	4 Companies				
TOTAL	113 Companies				

Source: https://www.ojk.go.id

Throughout 2017, the performance of the banking sector recorded a net profit amounting to IDR 115.98 trillion, with an average net profit growth of 5.42% (Kontan.co.id, Friday 06 April 2018/21:04WIB)<sup>[7]</sup> Profit The largest net accounted by large issuers, namely BBRI, BBCA, BMRI and BBNI<sup>[8]</sup>. According to Bisnis.com net profit after tax from 2015 - 2017 is as follows:

	Net Profit from the Banking Sector from 2015 – 2017						
	Year	Net Profit After Tax	Growth				
	2015	112,21 triliun					
	2016	104,63 triliun	(6,755%)				
	2017	131,15 triliun	23,099 %				
~	. D'						

	Table 3	
Ne	et Profit from the Banking Sector	r from 2015 – 2017
	NL D C A G T	C

Source: Bisnis.com February 26, 2018/15:14WIB<sup>[8]</sup>

The increase in net profit was the highest in the last 5 years. The increase in profit was the effect of efficiency and net non-performing loans (NPL) efforts made by bankers since a few years earlier (Busines.com February 26, 2018/15:14WIB)<sup>[8]</sup>.

According to Josua Pardede, economist of PT Bank Permata, Tbk said "Banking profitability in 2017 is still growing even though the trend of net interest margin (NIM) tends to decrease to 5.32% from 5.63% position at the end of 2016". And "Overall, bank profitability tends to improve due to a decrease in Allowance for Impairment Losses (CKPN) whose growth slowed to 2.8% at the end of 2017 from the previous year which still grew by 34%".<sup>[8]</sup>

"So one of the things to explain the large profits is the restructuring of bad loans and the assignment of SOEs to support the government's strategic projects, especially infrastructure" according to Bhima Yudhistira Adhinegara, Economist of the Institute for Development of Economics and Finance (INDEF)<sup>[8]</sup>. From the results of the pre-parliamentary review above it can be said that there is a relationship between NIMs and NPLs in the banking sector if the NIM rises, the NPL falls and if the NPL rises the NIM falls resulting in the performance of the banking sector will decline.

The NIM obtained by the banking sector from loans extended to the public, therefore credit has a large enough risk, because not all loans extended to the public are free from risk (firmansyah, 2014)<sup>[9]</sup>. In fact, not all loans are distributed to the public in a healthy category, but among them

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there are loans that have poor quality or problems, so there are non-performing loans called Non-Performing Loans (NPLs).

NPL is a ratio that shows the ability of bank management in managing non-performing loans (Iswi Hariyani, 2010)<sup>[10]</sup>. The higher the NPL ratio, the greater the number of problem loans, which results in vatal, namely the cessation of bank operations.

The phenomenon of rising NPLs in Indonesia OJK recorded that NPLs up to February 2018 reached IDR 134 Trillion, based on CNNIndonesia<sup>[11]</sup> the increase in NPLs almost occurred in all bank groups based on business activities or Commercial Banks Business Activities (BUKU).

Furthermore, in the third quarter of 2018 NPL Bank Sahabat Sampoerna (BSS) rose to the level of 4% from the same period the previous year of 3.75% Director of BSS said that in economic conditions such as this increase in NPL was unavoidable, and this increase was due to macro factors alone As stated by Mr. Henky Survaputra, Director of Finance of BSS, Bank Mayora also recorded that the NPL in the third quarter of 2018 was 2.72 compared to the position of the same period the previous year at the level of 2.02% (https://keuangan.kontan.co.id<sup>[7]</sup> accessed on September 15, 2019). The NPL limit set by Bank Indonesia (BI) is 5%.

In Indonesia, banks are supporting the implementation of national development with the aim of equitable development and national stability towards people's welfare based on Pancasila economic democracy and prudential principles. The state of banks is very necessary in economic development that requires substantial funds (Kuncoro and Suharjono, 2012)<sup>[12]</sup>

NPL (Non Performing Loan) can be influenced by 3 (three) things, namely (1) bank internal factors, (2) debtor internal factors, and (3) non-bank and debtor external factors. One of the intrnal factors is Net Interest Margin (NIM) (Andreani, Erick, 2016)<sup>[13]</sup>.

NIM is one of the factors that reflects market risk that arises due to the movement of market variables, it can be detrimental to banks. Based on Bank Indonesia regulations, one of the proxy of market risk is the loan interest rate measured by the difference between the funding interest rate and the lending interest rate in the absolute form between the total cost of funding interest and the total cost of loan interest called Net Interest margin (NIM) (Mawardi, 2005).NIM will affect the bank's profit and loss which will ultimately affect the performance of the bank, then a high NIM will prevent the emergence of problems faced by banks. However, Bank Indonesia stipulates that NIM of 6%<sup>[6]</sup> above can only be said that the bank is healthy. General description of NIM from 2016 to 2018 can be seen in table 4

	14010					
Net Profit from the Banking Sector from 2015 to 2018						
Year Net Profit After Tax Growth						
2016	106.544 billion	-				
2017	131.156 billion	23,10 %				
2018	150.013 billion	14,37 %				

Table 4

Source: Statistic Perbankan Indonesia (www.ojk.go.id)<sup>[4]</sup>

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The latest data can be seen in Figure 1 obtained from the OJK statistics are as follows: Figure 1 Panking statistics infographies in Indonesia

Banking statistics infographics in Indonesia



Source: https://www.ojk.go.id

Based on observations made by Alfado Agustio, said that of the 18 sectors receiving credit in terms of business, interest rates in education services were the highest followed by wholesale and retail trade and mining. But in terms of lending, financing to the wholesale and retail trade sectors is the largest followed by the manufacturing industry and the agricultural sector. So it can be concluded that the main contributor to banking profits is gross and wholesale trade, the amount of financing provided is still smaller than the sector.

(https://cnbcindonesia.com/market/20180922172304-17-34343/mengintip-laba-bank-bank-diindonesia-masih-seksi) [14]

From the results of previous studies according to Santoso, Sudarto, Sunarko 2014<sup>[15]</sup> concerning the analysis of the effect of LDR, BOPO, SIZE, LAR and NIM on NPLs on conventional BPRs in Central Java in the 2010-2012 period, showed that NIM had no effect on NPL. Besides that conducted by Adreani Caroline Barus, and Erick (2016)<sup>[13]</sup> said that NIM affects NPL, this contradicts what Santoso et. All (2012)<sup>[15]</sup> states that the NIM in the multiple liner equation is

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positive 0.39, this states that the higher the NIM, the higher the NPL will be, concluding that the amount of credit disbursed increases interest income, but with the amount of credit channeled it is likely the occurrence of bad loans will also increase.

Based on the explanation above, the researcher will see from the two things towards company performance measured by ROA, the researcher submits the research title:

Analysis of Non Performing Loans (NPL) and Net Interest Margin (NIM) on the Bank's performance, based on the classification of BOOKS registered at the Financial Services Authority (OJK) for the period of 2016 to 2018.

## **Theoretical basis**

## Non Performing Loans (NPL)

Non-performing loans (NPLs) are a comparison between non-performing loans and the amount of loans extended to the community as a whole. According to Iswi G.hariyani (2010)<sup>[10]</sup> the NPL ratio shows the ability of bank management in managing non-performing loans provided by banks. The higher the NPL, the worse the quality of bank credit that causes the number of problem loans is greater, so that a bank in greater trouble. According to Elen<sup>[16]</sup> Non-performing loans (NPLs) consist of two types, namely Net NPL and Gross NPL. NPL Net only counts loans that are clearly in bad status. Whereas Gross NPL also calculates substandard, dubious, and potentially bad loans. Therefore, in reading financial statements in the banking sector, make sure you pay close attention to the details of this NPL.<sup>[16]</sup>

Based on the codification of Bank Indonesia Regulation NPL is a ratio that measures the ratio of total non-performing loans to total loans, namely:

1. Credit is credit given to third parties (not including credit to other banks)

2. Non-performing loans are loans with substandard, doubtful and bad quality.

3. Non-performing loans are calculated in gross

4. Numbers are calculated per position (not annualized)

Furthermore, credit is classified into collectibility, namely: Substandard (KL), Doubtful (D) and Macet (M) Mudrajad Kuncoro and Suhardjono 2012.<sup>[12]</sup>

Based on Bank Indonesia Circular No. 13/30 / DPNP / December 16, 2011 NPL calculation as follows:

Total Troubled Credit		15.5% - NPL	
NPL = X 10	)0%	Credit Value =	X 100%
Total Credit		0.15%	

Furthermore, the value of NPL credit will be assessed as follows:

		Ta	able 5		
 _	-		-		

Non Performing Loan Weighting					
Predicate	NPL Ratio (%)	Credit Value (5)	Value	Weight	
Healthy	0 - 10,35	81 - 100	1		
Healthy enough	10, 35 - 12,60	66 < 81	2	25 %	
Unwell	12,60 - 14,50	51 < 66	3		
Not healthy	>14,50	0 < 51	4		

Source: Taswan (2006)<sup>[17]</sup>

Based on Bank Indonesia regulations NPLs cannot be greater than 5%

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# Net Interest Margin (NIM)

Net Interest Margin (NIM) is a ratio used to measure the ability of bank management in managing their productive assets to generate net interest. According to Riyadi (2012)<sup>[18]</sup>, Net Interest Margin is a comparison between Interest Income divided by average interest earnings assets. This ratio illustrates the level of net interest income earned using productive assets owned by banks. The higher the NIM ratio, the higher the interest income, so the smaller the bank faces a problem.

Based on Bank Indonesia circular No. 6/23 / DPNP dated May 31, 2004 The NIM is calculated as follows:

Net interest income

#### **Bank Performance**

According to Gitman (2006: 352)<sup>[20]</sup> company performance is the actual value per share that will be received if the company's assets are sold at stock prices. So Price to Book Value describes how much the market appreciates the book value of a company's stock. PBV shows how far a company is able to create company value relative to the amount of capital invested.

In this study, researchers did not use the PBV ratio because not all banking sectors listed on the Financial Services Authority (OJK) offered their shares on the stock exchange. Therefore, researchers only look at banking performance from its fundamental factors, namely using the Du Pont system analysis, namely:

> After - tax operating income Return On Assets (ROA) = ------

> > Assets

Source: Brealey, Myers and Marcus (2012)<sup>[19]</sup>

Or according to Gitman<sup>[20]</sup> ROA or sometimes also called ROI (Return on Investment) measures the overall effectiveness of management in generating profits with its available assets. The higher the firm's return on total assets, the better.

The return on total assets is calculated as:

Earnings available for common stockholders ROA = ------ X 100% Total Assets Source: Gitman (2015)<sup>[20]</sup>

In this research, banking performance is used Return On Assets, because ROA can measure the company's ability to generate profits using total assets owned. ROA was found by Modigliani and Miller (1958)<sup>[22]</sup> that the value of a company is determined by earnings power assets, indicating that the higher the earnings power the more efficient the asset turnover and the higher the profit margin has an impact on increasing the value of the company. Fuller and Farrell (1987).<sup>[23]</sup>

# **RESEARCH METHODOLOGY**

This study uses quantitative methods, the unit of analysis is the financial statements of banks registered at the Financial Services Authority (OJK) relating to Non Performing Loans (NPLs), Net Interest Margins (NIM), and Return On Assets (ROA) from 2016 to 2018 classified according to BUKU 1, BUKU 2, BUKU 3 and BUKU 4. With a total of 113 banking companies. Researchers intend to test all objects in fact there are some companies that do not publish their financial reports in a complete and sustainable manner so that the data obtained will be processed as follows:

	Table 0							
	The number of banks that are the object of research							
No	Comercial Bank Group of	Company	Company	Total Observed				
	Business Activity (BUKU)	Go Public	Go Private	Companies				
1	BUKU 1	7	10	17				
2	BUKU 2	19	28	47				
3	BUKU 3	14	12	26				
4	BUKU 4	4	0	4				
Jumlah		44	50	94				

Source: https://www.ojk.go.id (processed) [4]

The amount of data to be processed is 94 companies or 83% of the population with data from 2016 to 2018 so that the amount of data to be processed is 282 panel data.

		8							
No	Code	Bank Name	No	Code	Bank Name				
	BUKU 1								
1	AMRI	Bank Amar Indonesia	10	BBYB	Bank Yudha Bhakti, Tbk				
2	ARTO	Bank Artos Indonesia, Tbk	11	BEKS	BPD Banten (Pundi), Tbk				
3	BBIN	Bank Bisnis International	12	BKLU	BPD Bengkulu				
4	DNAR	Bank Dinar Indonesia, Tbk	13	LMPG	BPD Lampung				
5	BFIN	Bank Fama International	14	SULT	BPD Sulawesi Tengah				
6	BBHI	Bank Harda International, Tbk	15	CTNB	Centratama Nasional Bank				
7	BKEK	Bank Kesejahteraan Ekonomi	16	PMSB	Prima Master Bank				
8	NAGA	Bank Mitra Niaga, Tbk	17	AGRO	Bank BRI Agroniaga, Tbk				
9	BRIN	Bank Royal Indonesia							
		BU	JKU 2						
1	AGRS	Bank Agris, Tbk	25	BSSP	Bank Sahabat Sampoerna				
2	INPC	Bank Artha Graha Int, Tbk	26	SBII	Bank SBI Indonesia				
3	BNBA	Bank Bumi Arta, Tbk	27	BSHI	Bank Shinhan Indonesia				
4	BACA	Bank Capital Indonesia, Tbk	28	BSIM	Bank Sinar Mas, Tbk				
5	MCOR	Bank China Constructio BI, Tbk	29	BVIC	Bank Victoria Intl, Tbk				
6	COMM	Bank Commonwealth	30	SDRA	Bank Wori Saudara Ind, Tbk				
7	CTBC	Bank CTBC	31	BDIY	BPD Daerah Istimewa yogya'ta				
8	BGTG	Bank Ganesha, Tbk	32	BJMB	BPD Jambi				
9	BINA	Bank Ina Perdana, Tbk	33	BKBR	BPD Kalbar				
10	BISL	Bank Index Selindo	34	BKTM	BPD Kalimantan Selatan				
11	BJBJ	Bank Jasa Jakarta	35	BKTG	BPD Kalteng				

#### Table 7 Banking data based on BUKU

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12	BCIC	Bank J.Trust Indonesia, Tbk	30	6	BKTU	BPD Kaltim dan Kalut
13	BMNT	Bank Mandiri Taspen	3'	7	BMMU	BPD Maluku dan Maluku Utara
14	BMAS	Bank Maspion Indonesia, Tbk	- 38	8	BNTT	BPD Nusa Tenggara Timur
15	BMYR	Bank Mayora	39	9	BPAP	BPD Papua
16	BBMD	Bank Mestika Dharma, Tbk	40	0	BRKR	BPD Riau dan Kepulauan Riau
17	BABP	Bank MNC International, Tbk	4	1	BSSB	PBD Sulsel Sulbar
18	BMTS	Bank Multiarta Sentosa	42	2	BSTG	BPD Sulteng
19	NOBU	Bank National Nobu, Tbk	43	3	BSGT	BPD Sulut Gorontalo
20	BBNP	Bank Nusantara parahyangan, Tbk	44	4	BSBR	BPD Sumbar
21	BSWD	Bank Of India Indonesia, Tbk	4	5	BSBB	BPD Sumsel Bangka Belitung
22	BOKI	Bank Oke Indonesia	40	6	RBII	RaboBank International Ind
23	BKSW	Bank QNB Indonesia, Tbk	4′	7	PNBS	Bank Panin Dubai Syariah, Tbk
24	BRSP	Bank Resona Perdania				
		BU	IKU 3			
1	ANZI	Bank ANZ Indonesia	14	4	MAYA	Bank Mayapada Int'l, Tbk
2	BDKI	BPD DKI	15	5	BNII	Bank Maybank Indonesia, Tbk
3	BJBR	Bank Jabar dan Banten, Tbk	10	6	MEGA	Bank Mega, Tbk
4	BJTG	BPD Bank jateng	1'	7	BMHI	Bank Mizuho Indonesia
5	BJTM	BPD Bank Jawa Timur, Tbk	18	8	NISP	Bn\ank OCBC NISP, Tbk
6	BBTN	Bank Tabungan Negara, Tbk	19	9	PNBN	Bank Panin, Tbk
7	BBKP	Bank Bukopin, Tbk	20	0	STDC	Standchartred Bank
8	CBNA	Citi Bank NA	2	1	STMI	Sumitomo Mitsui Indonesia
9	BDMN	Bank Danamon Indonesia, Tbk	22	2	UOBI	UOB Indonesia
10	DBSI	Bank DBS Indonesia	23	3	BNGA	Bank CIMB Niaga, Tbk
11	HSBC	Bank HSBC Indonesia	24	4	BNLI	Bank Permata, Tbk
12	ICBC	Bank ICBC Indonesia	25	5	BRIS	Bank BRI Syariah, Tbk
13	KEBH	Bank KEB Hana Indonesia	20	6	BTPN	Bank BTPN, Tbk
		BU	IKU 4			
1	BBCA	Bank Central Asia, Tbk	3		BBRI	Bank Rakyat Indonesia, Tbk
2	BBNI	Bank Negara Indonesia, Tbk	4		BMRI	Bank Mandiri, Tbk

Source: https://www.ojk.go.id<sup>[4]</sup>

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# **Operationalization of Variables**

Based on the variables to be discussed, the operational research variables are as follows:

Table 8	
Operationalization	Variable

Variable	Indicator	Scale	Instrument
Independent Non Performing Loan (X <sub>1</sub> )	Total Troubled Credit NPL= X 100% Total Credit 15,5% - NPL Credit Value= X 100 % 0,15%	Ratio	Financial Statement
Independent Net Interest Margin (X <sub>2</sub> )	Net Interest Income NIM= X 100% Average of earning assets Credit Value = NIM Value	Ratio	Financial Statement
Dependent Return On Assets (Y)	Earnings available for Common Stock ROA =X100 % Total Assets	Ratio	Financial Statement

Hypothesis Design

Figure 2

Hipothesis Paradigm



 $X_1$  = Non Performing Loan (NPL)

- $X_2 = Net Interest Margin (NIM)$
- Y = Bank Performance Return On Assets (ROA)
- $H_1$  = Non Performing Loans (NPL) negatively affect bank performance (ROA)
- H<sub>2</sub> = Net Interest Margin (NIM) effect on Bank Performance (ROA)
- H<sub>3</sub> = Non Performing Loans (NPL) and Net Interest Margin (NIM) simultaneously influences Bank Performance (ROA)

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#### **Regression analysis**

Regression analysis is performed to find out how the dependent variable can be predicted by the Independent variable, which is to find out whether the rise and fall of the independent variable influences the dependent variable.

The simple regression equation formula is: Y = a + bX

The formula for the multiple regression equation is:  $Y = a + b_1X_1 + b_2X_2$ In this study are:

H<sub>1</sub>:  $Y = a + bX_1$  or ROA = a + b NPL H<sub>2</sub>:  $Y = a + bX_2$  or ROA = a + b NIM

H<sub>3</sub>:  $Y = a + bX_1 + bX_2$  or ROA =  $a + b_1$  NPL +  $b_2$  NIM

### **RESULTS AND DISCUSSION**

**Descriptive Statistics** 

1 Non Performing Loan (NPL)

Table 9 BUKU 1

	NON PERFORMING LOAN (NPL)												
	BANK	NON PE	RFORMIN	GLOAN	AVE-	CREDIT							
No	CODE	2016	2017	2018	RAGE	VALUE	VALUE	INFORMATION					
1	AMRI	1,75	3,14	(0,61)	1,43	93,82	1	healthy					
2	ARTO	4,08	4,09	4,15	4,11	75,96	2	healthy enough					
3	BBIN	2,40	1,93	2,09	2,14	89,07	1	healthy					
4	DNAR	1,34	2,35	1,94	1,88	90,82	1	healthy					
5	BFIN	2,05	3,54	3,98	3,19	82,07	1	healthy					
6	BBHI	1,90	2,39	2,44	2,24	88,38	1	healthy					
7	BKEK	0,46	1,91	2,06	1,48	93,49	1	healthy					
8	NAGA	2,34	1,03	0,31	1,23	95,16	1	healthy					
9	BRIN	2,73	2,31	1,38	2,14	89,07	1	healthy					
10	BBYB	2,48	2,07	9,92	4,82	71,18	2	healthy enough					
11	BEKS	4,76	4,67	4,92	4,78	71,44	2	healthy enough					
12	BKLU	0,06	0,06	0,05	0,06	102,96	1	healthy					
13	LMPG	0,14	0,05	0,04	0,08	102,82	1	healthy					
14	SULT	0,03	0,17	0,21	0,14	102,42	1	healthy					
15	CTNB	0,45	1,50	1,64	1,20	95,36	1	healthy					
16	PMSB	1,03	1,16	3,25	1,81	91,24	1	healthy					
17	AGRO	1,36	1,31	1,78	1,48	93,44	1	healthy					
	Average	1,73	1,98	2,33	2,01	TOTAL	14	healthy					
	Maximum	4,76	4,67	9,92		TOTAL	3	healthy enough					
	Minimum	0,03	0,05	(0,61)									
	Std Dev	1,36	1,34	2,51	1,80								

Source: <u>https://www.ojk.go.id</u> (Processed)

Based on table 9, it can be seen that out of 17 banks included in BUKU 1, the NPLs are categorized as healthy, 14 banks (82.35%) and healthy enough as 3 banks (17.65%) and an average of 2.01 for the period of 2016 until 2018. The highest NPL in BBYB was 9.92 in 2018 and the lowest in AMRI was 0.61 in 2018.

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	Table 10												
	BUKU 2												
NON PERFORMING LOAN (NPL)													
	BANK	NON PE	RFORMIN	G LOAN		CREDIT							
No	CODE	2016	2017	2018	AVERAGE	VALUE	VALUE	INFORMATION					
1	AGRS	3,33	4,96	4,46	4,25	75,00	2	Healthy enough					
2	INPC	1,44	4,30	3,33	3,02	83,18	1	Healthy					
3	BNBA	1,01	0,85	0,69	0,85	97,67	1	Healthy					
4	BACA	2,94	2,43	2,50	2,62	85,84	1	Healthy					
5	MCOR	2,48	2,26	1,62	2,12	89,20	1	Healthy					
6	COMM	1,68	2,90	2,34	2,31	87,96	1	Healthy					
7	CTBC	3,61	0,20	0,40	1,40	93,98	1	Healthy					
8	BGTG	0,80	0,20	0,83	0,61	99,27	1	Healthy					
9	BINA	2,29	2,48	2,06	2,28	88,16	1	Healthy					
10	BISL	1,53	1,66	2,17	1,79	91,42	1	Healthy					
11	BJSJ	-	-	0,15	0,05	103,00	1	Healthy					
12	BCIC	2,91	1,53	3,12	2,52	86,53	1	Healthy					
13	BMNT	0,07	0,12	0,25	0,15	102,36	1	Healthy					
14	BMAS	0,81	1,38	2,10	1,43	93,80	1	Healthy					
15	BMYR	1,66	2,23	1,32	1,74	91,76	1	Healthy					
16	BBMD	2,18	1,32	1,04	1,51	93,24	1	Healthy					
17	BABP	2,38	2,82	3,43	2,88	84,16	1	Healthy					
18	BMAS	1,02	0,77	0,56	0,78	98,11	1	Healthy					
19	NOBU	-	0,05	0,44	0,16	102,24	1	Healthy					
20	BBNP	4,07	4,50	3,83	4,13	75,78	2	Healthy enough					
21	BSWD	4,69	3,59	3,23	3,84	77,76	2	Healthy enough					
22	BOKI	0,05	2,11	2,43	1,53	93,13	1	Healthy					

#### Table 10 BUKU 2 (continued)

3	NON PERFORMING LOAN (NPL)											
23	BKSW	2,94	1,14	1,47	1,85	91,00	1	Healthy				
24	BRSP	1,26	0,90	1,95	1,37	94,20	1	Healthy				
25	BSSP	2,65	2,47	2,62	2,58	86,13	1	Healthy				
26	SBII	2,67	-	-	0,89	97,40	1	Healthy				
27	BSHI	0,86	0,92	0,74	0,84	97,73	1	Healthy				
28	BSIM	1,47	2,34	2,73	2,18	\$8,80	1	Healthy				
29	BVIC	2,37	2,32	1,90	2,20	88,69	1	Healthy				
30	SDRA	0,98	0,90	1,08	0,99	96,76	1	Healthy				
31	BDIY	0,51	2,47	2,29	1,76	91,62	1	Healthy				
32	BJMB	0,15	0,65	0,10	0,30	101,33	1	Healthy				
33	BKBR	0,15	0,17	0,15	0,16	102,29	1	Healthy				
34	BKTM	2,35	3,57	2,28	2,73	85,11	1	Healthy				
35	BKTG	0.09	0,21	0,11	0,14	102,42	1	Healthy				
36	BKTU	1,98	1,97	1,82	1,92	90,51	1	Healthy				
37	BMMU	0,73	0,65	0,44	0,61	99,29	1	Healthy				
38	BNTT	0,77	1,37	1,27	1,14	95,76	1	Healthy				
39	BPAP	3,95	3,79	2,44	3,39	80,71	1	Healthy				
40	BRKR	0,12	0,09	0,19	0,13	102,44	1	Healthy				
41	BSSB	0,25	0,21	0,26	0,24	101,73	1	Healthy				
42	BSTG	0,84	0,57	0,33	0,58	99,47	1	Healthy				
43	BSTG	0,50	0,52	1,62	0,88	97,47	1	Healthy				
44	BSBR	2,14	1,96	1,49	1,86	90,91	1	Healthy				
45	BSBB	3,46	3,17	1,85	2,83	84,49	1	Healthy				
46	RBII	2,21	1,46	2,54	2,07	89,53	1	Healthy				
47	PNBS	1,86	4,83	3,84	3,51	79,93	2	Healthy enough				
	Average	1,66	1,73	1,66	1,68	TOTAL	43	Healthy				
	Maximum	4,69	4,96	4,46		TOTAL	4	Healthy enough				
	Minimum			-	2	Contraction (1011-		10-03/00-043/00/00/00-03/00				
_	Std Dev	1,24	1,39	1,18	_		-					

Source: <u>https://www.ojk.go.id</u> (Processed)

Of the 47 banks included in the NPL BUKU 2 it is said to be healthy as many as 43 banks (91.48%) and quite healthy as many as 4 banks (8.51%) with an average of 1.68 lower than BUKU 1. The highest NPL is in the AGRS of 4.96 in 2017 and the lowest in SBII of 0.00 in 2018.

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	Table 11 BUKU 3												
NON PERFORMING LOAN (NPL)													
	BANK	NON PE	RFORMIN	G LOAN		CREDIT							
No	CODE	2016	2017	2018	AVERAGE	VALUE	VALUE	INFORMATION					
1	ANZI	1,44	1,81	0,03	1,09	96,04	1	Healthy					
2	BDKI	2,75	2,31	1,58	2,21	88,58	1	Healthy					
3	BJBR	0,75	0,79	0,90	0,81	97,91	1	Healthy					
4	BJTG	0,82	0,76	0,80	0,79	98,04	1	Healthy					
5	BJTM	0,65	0,46	0,61	0,57	99,51	1	Healthy					
6	BBTN	1,85	1,66	1,83	1,78	91,47	1	Healthy					
7	BBKP	2,87	6,37	4,75	4,66	72,24	2	Healthy enough					
8	CBNA	0,94	0,54	0,52	0,67	98,89	1	Healthy					
9	BDMN	1,96	1,88	2,05	1,96	90,24	1	Healthy					
10	DBSI	1,62	0,98	0,94	1,18	95,47	1	Healthy					
11	HSBC	0,04	1,70	1,22	0,99	96,76	1	Healthy					
12	ICBC	2,09	2,06	2,47	2,21	88,62	1	Healthy					
13	KEBH	0,46	0,60	1,45	0,84	97,76	1	Healthy					
14	MAYA	1,22	4,20	3,26	2,89	84,04	1	Healthy					
15	BNII	2,37	1,83	1,57	1,92	90,51	1	Healthy					
16	MEGA	2,59	1,41	1,27	1,76	91,62	1	Healthy					
17	BMHI	0,15	0,53	0,56	0,41	100,58	1	Healthy					
18	NISP	0,77	0,72	0,82	0,77	98,20	1	Healthy					
19	PNBN	1,82	0,52	0,74	1,03	96,49	1	Healthy					
20	STDC	1,44	1,11	0,49	1,01	96,58	1	Healthy					
21	STMI	0,16	0,15	0,18	0,16	102,24	1	Healthy					
22	UOBI	2,61	0,93	0,89	1,48	93,49	1	Healthy					
23	BNGA	2,16	2,16	1,55	1,96	90,29	1	Healthy					
24	BNLI	2,20	1,70	1,70	1,87	90,89	1	Healthy					
25	BRIS	3,19	4,75	4,97	4,30	74,64	2	Healthy enough					
26	BTPN	0,40	0,40	0,50	0,43	100,44	1	Healthy					
	Average	1,51	1,63	1,45	1,53	TOTAL	24	Healthy					
	Maximum	3,19	6,37	4,97		TOTAL	2	Healthy enough					
	Minimum	0,04	0,15	0,03									
	Standard I	0,94	1,46	1,24									

#### Source: <u>https://www.ojk.go.id</u> (Processed)

Of the 26 banks included in BUKU 3 NPL it is said to be healthy as many as 24 banks (92.31%) and 2 banks are quite healthy (7.69%) with an average lower than BUKU 1 and BUKU 2 meaning the NPL in BUKU 3 is better than with BUKU 1 and BUKU 2. The highest NPL was 6.37 in BBKP in 2017 and the lowest in ANZI was 0.03 in 2018. Table 12

	BUKU 4											
NON PERFORMING LOAN (NPL)												
	BANK	NON PE	RFORMIN	G LOAN		CREDIT						
No	CODE	2016	2017	2018	AVERAGE	VALUE	VALUE	INFORMATION				
1	BBCA	0,31	0,45	0,45	0,40	100,64	1	Healthy				
2	BBNI	0,44	0,70	0,85	0,66	98,91	1	Healthy				
3	BBRI	1,09	0,88	0,92	0,96	96,91	1	Healthy				
4	BMRI	1,38	1,06	0,67	1,04	96,42	1	Healthy				
	Average	0,81	0,77	0,72	0,77	TOTAL	4	Healthy				
	Maximum	1,38	1,06	0,92								
	Minimum	0,31	0,45	0,45								
	Std Dev	0,51	0,26	0,21								

Source: <u>https://www.ojk.go.id</u> (Processed)

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Of the 4 banks in BUKU 4 all are categorized as healthy and the average NPL from 2016 to 2018 is 0.77 lower than BUKU 1, BUKU 2 and BUKU 3, meaning that most of the loans extended are categorized smoothly. The highest NPL in BMRI in 2016 was 1.38 and the lowest in BBCA was 0.31 in 2016. So based on BUKU 1 to BUKU 4, BUKU 4 had the best NPL. Therefore there should be special attention to BUKU 1 and BUKU 2 although at the end of 2018 it was already below 5% but still needs to be fostered and monitored regarding its credit policy.

Table 13													
BUKU 1													
NET INTEREST MARGIN (NIM)													
	BANK	NET IN	TEREST M	ARGIN		CREDIT							
No	CODE	2016	2017	2018	AVERAGE	VALUE	VALUE	INFORMATION					
1	AMRI	14,45	12,67	18,02	15,05	15,05	1	Above Standard					
2	ARTO	5,48	4,46	4,84	4,93	4,93	2	Below the Standard					
3	BBIN	6,75	7,51	7,62	7,29	7,29	1	Above Standard					
4	DNAR	4,42	4,07	4,20	4,23	4,23	2	Below the Standard					
5	BFIN	5,64	5,19	5,67	5,50	5,50	2	Below the Standard					
6	BBHI	5,41	5,24	5,17	5,27	5,27	2	Below the Standard					
7	BKEK	7,50	5,81	5,00	6,10	6,10	1	Above Standard					
8	NAGA	2,98	2,24	2,89	2,70	2,70	2	Below the Standard					
9	BRIN	4,82	4,27	4,24	4,44	4,44	2	Below the Standard					
10	BBYB	6,96	6,87	5,99	6,61	6,61	1	Above Standard					
11	BEKS	1,93	3,07	4,96	3,32	3,32	2	Below the Standard					
12	BKLU	7,69	6,12	7,50	7,10	7,10	1	Above Standard					
13	LMPG	6,07	5,26	5,52	5,62	5,62	2	Below the Standard					
14	SULT	7,17	6,60	6,32	6,70	6,70	1	Above Standard					
15	CTNB	7,43	5,97	6,61	<b>6,6</b> 7	6,67	1	Above Standard					
16	PMSB	4,83	5,35	4,50	4,89	4,89	2	Below the Standard					
17	AGRO	4,35	3,76	3,50	3,87	3,87	2	Below the Standard					
	Average	6,11	5,56	6,03	5,90	TOTAL	7	Above Standard					
	Maximum	14,45	12,67	18,02		TOTAL	10	Below the Standard					
	Minimum	1,93	2,24	2,89									
	Std Dev	2,69	2.29	3.34									

2. Net Interest Margin (NIM)

Source: <u>https://www.ojk.go.id</u> (Processed)

NIM, according to Bank Indonesia regulations, ideally is at least 6% of the results obtained from the BUKU 1 NIM above Bank Indonesia's standards, there are 7 banks (41.18%) and below the banking standard 10 (58.82%) with an average of 5.90. The highest NIM was in AMRI of 18.02 in 2018 and the lowest NIM was 1.93 in BEKS in 2016.

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	Table 14											
	BUKU 2											
	NET INTEREST MARGIN (NIM)											
	BANK NET INTEREST MARGIN CREDIT											
No	CODE	2016	2017	2018	AVERAGE	VALUE	VALUE	INFORMATION				
1	1 AGRS 3,86 3,17 3,42 3,48 3,48 2 Above Standard											
2	INPC	4,65	5,15	5,39	5,06	5,06	2	Below the Standard				
3	BNBA	4,74	4,81	4,45	4,67	4,67	2	Below the Standard				
4	BACA	4,37	4,21	4,20	4,26	4,26	2	Below the Standard				
5	MCOR	4,48	4,69	4,26	4,48	4,48	2	Below the Standard				
6	COMM	5,86	5,14	5,08	5,36	5,36	2	Below the Standard				
7	CTBC	5,01	4,90	4,16	4,69	4,69	2	Below the Standard				
8	BGTG	5,53	5,61	5,39	5,51	5,51	2	Below the Standard				
9	BINA	5,10	4,48	4,55	4,71	4,71	2	Below the Standard				
10	BISL	5,09	5,74	5,03	5,29	5,29	2	Below the Standard				
11	BJSJ	4,53	4,11	4,04	4,23	4,23	2	Below the Standard				
12	BCIC	2,26	2,41	2,28	2,32	2,32	2	Below the Standard				
13	BMNT	9,51	7,64	6,44	7,86	7,86	1	Above Standard				
14	BMAS	5,28	4,95	4,75	4,99	4,99	2	Below the Standard				
15	BMYR	4,52	5,39	5,24	5,05	5,05	2	Below the Standard				
16	BBMD	7,48	7,34	6,41	7,08	7,08	1	Above Standard				
17	BABP	3,28	3,04	4,10	3,47	3,47	2	Below the Standard				
18	BMAS	4,18	3,36	3,25	3,60	3,60	2	Below the Standard				
19	NOBU	4,32	4,22	4,62	4,39	4,39	2	Below the Standard				
20	BBNP	6,13	6,12	6,60	6,28	6,28	1	Above Standard				
21	BSWD	3,69	3,39	3,84	3,64	3,64	2	Below the Standard				
22	BOKI	5,48	6,78	7,92	6,73	6,73	1	Above Standard				
Table 14												
NET INTEREST MARGIN (NIM)												
23	23 BKSW 2.25 1.22 1.73 1.73 1.73 2 Below the Standard											
24	BRSP	3,62	3,04	3,02	3,23	3,23	2	Below the Standard				
25	BSSP	6,52	6,76	7,75	7,01	7,01	1	Above Standard				
_												

24	DKSF	5,02	5,04	5,02	3,23	3,23		below the standard
25	BSSP	6,52	6,76	7,75	7,01	7,01	1	Above Standard
26	SBII	4,60	4,67	4,62	4,63	4,63	2	Below the Standard
27	BSHI	4,81	5,05	5,31	5,06	5,06	2	Below the Standard
28	BSIM	6,44	6,46	7,61	6,84	6,84	1	Above Standard
29	BVIC	1,53	2,13	1,02	1,56	1,56	2	Below the Standard
30	SDRA	4,74	4,86	5,04	4,88	4,88	2	Below the Standard
31	BDIY	7,50	7,52	7,21	7,41	7,41	1	Above Standard
32	BJMB	6,52	5,36	5,92	5,93	5,93	2	Below the Standard
33	BKBR	8,21	8,24	7,22	7,89	7,89	1	Above Standard
34	BKTM	7,78	6,78	6,06	6,87	6,87	1	Above Standard
35	BKTG	9,41	8,63	8,42	8,82	8,82	1	Above Standard
36	BKTU	7,28	7,23	5,33	6,61	6,61	1	Above Standard
37	BMMU	9,14	8,31	8,32	8,59	8,59	1	Above Standard
38	BNTT	9,73	9,51	9,11	9,45	9,45	1	Above Standard
39	BPAP	7,01	7,16	6,82	7,00	7,00	1	Above Standard
40	BRKR	7,15	5,48	5,81	6,15	6,15	1	Above Standard
41	BSSB	9,95	6,37	6,51	7,61	7,61	1	Above Standard
42	BSTG	7,98	7,56	7,57	7,70	7,70	1	Above Standard
43	BSTG	9,25	9,60	8,24	9,03	9,03	1	Above Standard
44	BSBR	6,74	6,53	7,17	6,81	6,81	1	Above Standard
45	BSBB	11,82	10,78	7,70	10,10	10,10	1	Above Standard
46	RBII	3,54	3,58	2,73	3,28	3,28	2	Below the Standard
47	PNBS	2,67	(118,27)	3,09	(37,50)	(37,50)	2	Below the Standard
	Average	5,86	3,00	5,42	5,68	TOTAL	20	Above Standard
	Maximum	11,82	10,78	9,11		TOTAL	27	Below the Standard
	Minimum	1,53	(118,27)	1,02				
	Std Dev	2.30	18 19	1 90				

# Source: <u>https://www.ojk.go.id</u> (Processed)

From BUKU 2 listed 47 banks received NIMs above the BI 20 banking standard (42.55%) and below the BI 27 banking standard (57.45%) with an average of 5.68. The highest NIM in BSBB was 11.82 in 2016 and the lowest (118.27) in PNBS in 2017 but subsequently experienced positive growth.

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	Table 15												
BUKU 3													
NET INTEREST MARGIN (NIM)													
	BANK NET INTEREST MARGIN CREDIT												
No	CODE	2016	2017	2018	AVERAGE	VALUE	VALUE	INFORMATION					
1	ANZI	7,00	7,68	5,40	6,69	6,69	1	Above Standard					
2	BDKI	7,27	5,31	5,29	5,96	5,96	2	Below the Standard					
3	BJBR	7,40	6,79	6,37	6,85	6,85	1	Above Standard					
4	BJTG	7,01	5,73	6,75	6,50	6,50	1	Above Standard					
5	BJTM	6,94	6,68	6,37	6,66	6,66	1	Above Standard					
6	BBTN	4,98	4,76	4,32	4,69	4,69	2	Below the Standard					
7	BBKP	3,93	2,89	2,83	3,22	3,22	2	Below the Standard					
8	CBNA	6,24	6,36	5,79	6,13	6,13	1	Above Standard					
9	BDMN	7,36	7,03	6,22	6,87	6,87	1	Above Standard					
10	DBSI	4,96	5,21	5,35	5,17	5,17	2	Below the Standard					
11	HSBC	0,05	5,25	4,64	3,31	3,31	2	Below the Standard					
12	ICBC	3,24	2,99	2,35	2,86	2,86	2	Below the Standard					
13	KEBH	3,81	3,35	3,22	3,46	3,46	2	Below the Standard					
14	MAYA	5,16	4,26	4,09	4,50	4,50	2	Below the Standard					
15	BNII	4,59	4,49	4,35	4,48	4,48	2	Below the Standard					
16	MEGA	7,01	5,80	5,19	6,00	6,00	1	Above Standard					
17	BMHI	2,67	2,46	2,19	2,44	2,44	2	Below the Standard					
18	NISP	4,62	4,47	4,15	4,41	4,41	2	Below the Standard					
19	PNBN	5,03	4,49	4,61	4,71	4,71	2	Below the Standard					
20	STDC	4,87	4,26	4,38	4,50	4,50	2	Below the Standard					
21	STMI	1,92	1,59	1,37	1,63	1,63	2	Below the Standard					
22	UOBI	4,31	3,85	3,79	3,98	3,98	2	Below the Standard					
23	BNGA	5,64	5,60	5,12	5,45	5,45	2	Below the Standard					
24	BNLI	3,90	4,00	4,10	4,00	4,00	2	Below the Standard					
25	BRIS	6,37	5,84	5,36	5,86	5,86	2	Below the Standard					
26	BTPN	12,00	11,60	11,30	11,63	11,63	1	Above Standard					
	Average	5,32	5,11	4,80	5,08	TOTAL	8	Above Standard					
	Maximum	12,00	11,60	11,30		TOTAL	18	Below the Standard					
	Minimum	0,05	1,59	1,37									
	Std Dev	2,28	1,98	1,89									

# Source: <u>https://www.ojk.go.id</u> (Processed)

From BUKU 3 there were 26 NIM banks above the BI 8 banking standard (30.77%) and 18 banks below the standard (69.23%) with an average of 5.08. The highest NIM on BTPN was 12.00 in 2016 and the lowest NIM was 0.05 on HSBC in 2016.

	BUKU 4												
NET INTEREST MARGIN (NIM)													
	BANK NET INTEREST MARGIN CREDIT												
No	CODE	2016	2017	2018	AVERAGE	VALUE	VALUE	INFORMATION					
1	BBCA	6,81	6,19	6,13	6,38	6,38	1	Above Standard					
2	BBNI	6,17	5,50	5,29	5,65	5,65	2	Below the Standard					
3	BBRI	8,00	7,93	7,45	7,79	7,79	1	Above Standard					
4	BMRI	6,29	5,63	5,52	5,81	5,81	2	Below the Standard					
	Average	6,82	6,31	6,10	6,41	TOTAL	2	Above Standard					
	Maximum	8,00	7,93	7,45		TOTAL	2	Below the Standard					
	Minimum	6,17	5,50	5,29									
	Std Dev	0,84	1,12	0,97									

Source: <u>https://www.ojk.go.id</u> (Processed)

From BUKU 4 listed 4 banks, 2 of which are below the standard NIM (50%) and 2 above the standard (50%), with an average NIM of 6.41 above the BI Standard. The highest NIM was on BBRI of 8.00, and the lowest was on BMRI of 5.29 in 2018.

3. Return On Assets (ROA)

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	Table 17									
				BUKU 1						
RETURN ON ASSETS (ROA)										
	BANK	RETU	JRN ON A	SSET						
No	CODE	2016	2017	2018	AVERAGE	VALUE	INFORMATION			
1	AMRI	(5,08)	0,79	1,59	(0,90)	2	Negative			
2	ARTO	(5,25)	(1,06)	(2,76)	(3,02)	2	Negative			
3	BBIN	2,49	3,30	3,84	3,21	1	Positive			
4	DNAR	0,83	0,57	0,81	0,74	1	Positive			
5	BFIN	2,34	2,08	2,54	2,32	1	Positive			
6	BBHI	0,53	0,69	(5,06)	(1,28)	2	Negative			
7	BKEK	2,12	0,55	0,57	1,08	1	Positive			
8	NAGA	0,76	0,37	0,51	0,55	1	Positive			
9	BRIN	0,41	(2,14)	0,53	(0,40)	2	Negative			
10	BBYB	2,53	0,43	(2,83)	0,04	2	Negative			
11	BEKS	(9,58)	(1,43)	(1,57)	(4,19)	2	Negative			
12	BKLU	2,78	2,02	1,76	2,19	1	Positive			
13	LMPG	2,85	2,44	2,27	2,52	1	Positive			
14	SULT	2,91	2,49	2,51	2,64	1	Positive			
15	CTNB	0,36	0,12	(0,92)	(0,15)	2	Negative			
16	PMSB	(2,26)	0,76	0,92	(0,19)	2	Negative			
17	AGRO	1,49	1,45	1,54	1,49	1	Positive			
	Average	0,01	0,79	0,37	TOTAL	8	Negative			
	Maximum	2,91	3,30	3,84	TOTAL	9	Positive			
	Minimum	(9,58)	(2,14)	(5,06)						
	Std Dev	3,55	1,44	2,31						

# Source: <a href="https://www.ojk.go.id">https://www.ojk.go.id</a> (Processed)

In BUKU 1 which has positive ROA of 9 banks (52.94%) and the remaining 8 banks are Negative ROA (47.06%), with an average of 0.39. The highest ROA at BBIN was 3.84 in 2018 and the lowest ROA was (9.58) at BEKS in 2016.

				BUKU 2			
			RETURN	ON ASSE	IS (ROA)		
	BANK	RETU	JRN ON A	SSET			
No	CODE	2016	2017	2018	AVERAGE	VALUE	INFORMATION
1	AGRS	0,15	(0,20)	(0,77)	(0,27)	2	Negative
2	INPC	0,35	0,31	0,27	0,31	1	Positive
3	BNBA	1,52	1,73	1,77	1,67	1	Positive
4	BACA	1,00	0,79	0,90	0,90	1	Positive
5	MCOR	0,69	0,54	0,86	0,70	1	Positive
6	COMM	(2,80)	0,52	0,37	(0,64)	2	Negative
7	CTBC	1,57	0,62	0,88	1,02	1	Positive
8	BGTG	1,62	1,59	0,16	1,12	1	Positive
9	BINA	1,02	0,82	0,50	0,78	1	Positive
10	BISL	2,19	1,78	1,56	1,84	1	Positive
11	BJSJ	2,74	2,56	2,51	2,60	1	Positive
12	BCIC	(5,02)	0,80	(2,25)	(2,16)	2	Negative
13	BMNT	1,66	1,62	2,02	1,77	1	Positive
14	BMAS	1,67	1,60	1,54	1,60	1	Positive
15	BMYR	1,39	0,81	0,73	0,98	1	Positive
16	BBMD	2,30	3,19	2,96	2,82	1	Positive
17	BABP	0,11	(7,47)	0,74	(2,21)	2	Negative
18	BMAS	1,76	1,63	1,67	1,69	1	Positive
19	NOBU	0,53	0,48	0,42	0,48	1	Positive
20	BBNP	0,15	(0,90)	0,22	(0,18)	2	Negative
21	BSWD	(11,15)	(3,39)	0,24	(4,77)	2	Negative
22	BOKI	(1,82)	0,95	0,50	(0,12)	2	Negative

Table 18

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	Table 18 BUKU 2 (continued) RETURN ON ASSETS (ROA)								
23	BKSW	(3.34)	(3,72)	0.12	(2,31)	2	Negative		
24	BRSP	1,20	(1,87)	0,12	(0,18)	2	Negative		
25	BSSP	0.74	0.65	1,21	0.87	1	Positive		
26	SBII	0,17	2,52	3,95	2,21	1	Positive		
27	BSHI	(0,01)	0.75	2,19	0,98	1	Positive		
28	BSIM	1.72	1,26	0,25	1,08	1	Positive		
29	BVIC	0,52	0,64	0,33	0,50	1	Positive		
30	SDRA	1,93	2,37	2,59	2,30	1	Positive		
31	BDIY	2,94	3,05	2.88	2.96	1	Positive		
32	BJMB	3,14	2,43	3,65	3,07	1	Positive	1	
33	BKBR	2,88	2,94	2,71	2.84	1	Positive		
34	BKTM	2,34	1,83	1,31	1,83	1	Positive		
35	BKTG	4,24	3,84	3,87	3,98	1	Positive		
36	BKTU	2,99	2,71	2,39	2,70	1	Positive		
37	BMMU	3,56	3,15	3,14	3,28	1	Positive		
38	BNTT	2,94	2,98	2,77	2,90	1	Positive		
39	BPAP	(0,61)	0,61	1,24	0,41	1	Positive		
40	BRKR	2,74	2,30	1,97	2,34	1	Positive	-	
41	BSSB	4,96	3,56	3,67	4,06	1	Positive	3	
42	BSTG	3,87	3,92	4,01	3,93	1	Positive		
43	BSTG	2,00	2,80	2,30	2,37	1	Positive		
44	BSBR	2,19	1.86	2,03	2,03	1	Positive		
45	BSBB	2,23	1,83	1,93	2,00	1	Positive		
46	RBII	2,13	0,30	(5,30)	(0,96)	2	Negative		
47	PNBS	0,37	(10,70)	0,26	(3,36)	2	Negative		
	Average	1,05	0,90	1,35	TOTAL	36	Positive		
	Maximum	4,96	3,92	4,01	TOTAL	11	Negative		
	Minimum	(11,15)	(10,70)	(5,30)			1.0		
i	Std Dev	2,61	2,68	1,67					

Source: <u>https://www.ojk.go.id</u> (Processed)

In BUKU 2 out of 47 banks 36 had a positive ROA (76.59%) and those who had a negative ROA were 11 banks (23.41%), with an average of 1.10. The highest ROA in BSSB was 4.96 in 2016 and the lowest ROA was (11.15) in BSWD in 2016 and subsequently towards a positive ROA.

	BUKU 3									
	BANK	RETURN ON ASSET			SEIS		111			
No	CODE	2016	2017	2018	AVERAGE	VALUE	INFORMATION			
1	ANZI	1,63	2,78	4,56	2,99	1	Positive			
2	BDKI	2,29	2,04	2,24	2,19	1	Positive			
3	BJBR	2.22	2,01	1.71	1.98	1	Positive			
4	BJTG	2,60	2,69	2,66	2,65	1	Positive			
5	BJTM	2,98	3,12	2,96	3,02	1	Positive			
6	BBTN	1,76	1,71	1,34	1,60	1	Positive			
7	BBKP	0,54	0,09	0,22	0,28	1	Positive			
8	CBNA	4,14	4,34	3,22	3.90	1	Positive			
9	BDMN	2,26	3,00	2,99	2,75	1	Positive			
10	DBSI	1,30	1.02	0.05	0,79	1	Positive			
11	HSBC		1,13	1,78	0,97	1	Positive			
12	ICBC	1.61	0,83	0,28	0,91	1	Positive			
13	KEBH	2,77	2,69	1.74	2,40	1	Positive			
14	MAYA	2,03	1,30	0,73	1,35	1	Positive			
15	BNII	1,48	1.23	1,48	1,40	1	Positive			
16	MEGA	2,36	2,24	2,47	2,36	1	Positive			
17	BMHI	2,31	2,30	1,79	2,13	1	Positive			
18	NISP	1,85	1,96	2,10	1,97	1	Positive			
19	PNBN	1.69	1.87	2,25	1.94	1	Positive			
20	STDC	0,58	0,32	1,26	0,72	1	Positive			
21	STMI	1,79	1,63	1,56	1,66	1	Positive			
22	UOBI	0,77	0,32	0,71	0,60	1	Positive			
23	BNGA	1,09	1,70	1,85	1,55	1	Positive			
24	BNLI	(4,90)	0,60	0.80	(1,17)	2	Negative			
25	BRIS	0.95	0.51	0.43	0.63	1	Positive			
26	BTPN	3,10	2,10	3,10	2,77	1	Positive			
	Average	1,58	1.75	1,78	TOTAL	25	Positive			
5 7	Maximum	4,14	4,34	4,56	TOTAL	1	Negative			
1	Minimum	(4,90)	0,09	0,05						
1	Std dev	1,60	1.02	1.09	8 8		· · · · · · · · · · · · · · · · · · ·			

#### Source: <u>https://www.ojk.go.id</u> (Processed)

In BUKU 3 listed 26 banks, 25 had positive ROA (96.15%) and 1 company was Negative ROA (3.85%) with an average of 1.71. The highest ROA at ANZI was 4.56 in 2018 and the lowest ROA at BNLI was (4.90) in 2016.

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				Table 20								
	BUKU 4											
	RETURN ON ASSETS											
	BANK	RETU	JRN ON A	SSET		CREDIT						
No	CODE	2016	2017	2018	AVERAGE	VALUE	INFORMATION					
1	BBCA	3,96	3,89	4,01	3,95	1	Positive					
2	BBNI	2,69	2,75	2,78	2,74	1	Positive					
3	BBRI	3,84	3,69	3,68	3,74	1	Positive					
4	BMRI	1,95	2,72	3,17	2,61	1	Positive					
	Average	3,11	3,26	3,41	TOTAL	4	Positive					
	Maximum	3,96	3,89	4,01								
	Minimum	1,95	2,72	2,78								
	Std dev	0,96	0,61	0,54								

### Source: https://www.ojk.go.id (Processed)

In BUKU 4 all ROAs are positive with an average of 3.26. The highest ROA on BBCA in 2016 was 3.96 and the lowest was on BMRI of 1.95 in 2016.

# 2. Hypothesis Testing

T test is used to see the effect of independent variables on related variables and to see whether the research hypothesis is accepted or rejected. The significance level used was 5% ( $\alpha = 0.05$ ). So if a bebs variable has a p-value of statistic t greater than 0.05, then that variable has no effect on the dependent variable.

## Hypothesis 1

a. H<sub>0</sub>: Non Performing Loans (NPL) do not affect Bank Performance (ROA)

b. Ha: Non Performing Loans (NPL) affect Bank Performance (ROA)

### Hypothesis 2

a. H<sub>0</sub>: Net Interest Margin (NIM) has no effect on Bank Performance (ROA)

b. Ha: Net Interest Margin (NIM) affects the Bank's performance (ROA)

# Hypothesis 3

a. H<sub>0</sub>: Non Performing Loans (NPL) and Net Interest Margin (NIM) have no effect on Bank Performance (ROA)

b. H<sub>a</sub>: Non Performing Loans (NPL) and Net Interest Margin (NIM) affect the Bank's Performance (ROA)

BUKU 1 Test Results based on the T test table obtained:

	Coefficients <sup>a</sup>									
		Unstandardized		Standardized						
		Coefficients		Coefficients						
			Std.							
Mo	odel	В	Error	Beta	t	Sig.				
1	(Constant)	2,336	1,813		1,288	,204				
	NPL	-,973	,354	-,376	-2,750	,008				
	NIM	,084	,237	,048	,353	,726				

# Tabel 21 T test

a. Dependent Variable: ROA

1. NPL has an effect on ROA with a significance value below 0.05 which is 0.008 because the research hypothesis (Ha) is accepted.

2. NIM has no effect on ROA with a significance value above 0.05 which is 0.726 therefore the research hypothesis (Ha) is rejected.

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	Tabel 22 F test								
		ANO	VA <sup>a</sup>						
		Sum of		Mean					
Model		Squares	df	Square	F	Sig.			
1	Regression	181,249	2	90,625	4,313	.019 <sup>b</sup>			
	Residual	1008,673	48	21,014					
	Total	1189,922	50						

a. Dependent Variable: ROAb. Predictors: (Constant), NIM, NPL

3. NPL and NIM affect ROA with a significance value below 0.05, which is 0.019, which means that the research hypothesis (Ha) is accepted

So that the regression equation obtained is:

 $Y = 2.336 - 0.973X_1 + 0.84 X_2 + e \text{ or ROA} = 2,336 - 0,973 \text{ NPL} + 0,84 \text{ NIM} + e$ Tabel 23 Determination Coefficient Test

#### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.390 <sup>a</sup>	,152	,117	4,58410

a. Predictors: (Constant), NIM, NPL

b. Dependent Variable: ROA

Based on Table 23, a Non Performing Loan and Net Interest Margin can be obtained together affecting Return On Assets by 15.2%.

Tabel 24 T test

BUKU 2 Test Results based on the T test table obtained:

Coefficients <sup>a</sup>								
	Unstanc Coeffi	lardized cients	Standardized Coefficients					
Model	В	Std. Error	Beta	t	Sig.			
1 (Constant)	2,079	,274		7,597	,000			
NPL	-,834	,121	-,448	-6,895	,000			
NIM	,089	,014	,404	6,219	,000			

a. Dependent Variable: ROA

- 4. NPL has an effect on ROA with a significance value below 0.05 which is 0.000 because the research hypothesis (Ha) is accepted.
- 5. NIM has an effect on ROA with a significance value below 0.05, that is 0.000, therefore the research hypothesis (Ha) is accepted.

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ANOVAª								
Model	Sum of Squares	Df	Mean Square	F	Sig.			
1 Regression	352,523	2	176,261	57,180	.000 <sup>b</sup>			
Residual	425,392	138	3,083					
Total	777,914	140						

Tabel 25 F test

a. Dependent Variable: ROA

b. Predictors: (Constant), NIM, NPL

6. NPL and NIM affect ROA with a significance value below 0.05, which means 0.000 means the research hypothesis (Ha) is accepted.

So that the regression equation obtained is:

 $Y = 2.079 - 0.834 X_1 + 0.089 X_2 + e \text{ or } ROA = 2,079 - 0,834 NPL + 0,089 NIM + e$ 

Tabel 26 Determination Coefficient test

Model Summary

		R	Adjusted R	Std. Error of the
Model	R	Square	Square	Estimate
1	.673 <sup>a</sup>	,453	,445	1,75572

a. Predictors: (Constant), NIM, NPL

Based on table 26 obtained Non Performing Loans (NPL) and Net Interest Margin (NIM) effect on Return On Assets of 45.3%.

BUKU 3 Test Results based on the T test table obtained:

Tabel 27 T test Coefficients <sup>a</sup>									
	Unstand Coeffi	lardized cients	Standardized Coefficients						
Model	В	Std. Error	Beta	t	Sig.				
1 (Constant)	1,284	,382		3,360	,001				
NPL	-,380	,103	-,366	-3,692	,000				
NIM	,206	,061	,332	3,344	,001				

a. Dependent Variable: ROA

- 7. NPL has an effect on ROA with a significance value below 0.05 which is 0.000 because the research hypothesis (Ha) is accepted.
- 8. NIM affects ROA with a significance value below 0.05, that is 0.001, therefore the research hypothesis (Ha) is accepted.

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	ANOVAª						
Model		Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	33,857	2	16,929	13,810	.000 <sup>b</sup>	
	Residual	91,937	75	1,226			
	Total	125,795	77				

Tabel 28 F test

a. Dependent Variable: ROA

b. Predictors: (Constant), NIM, NPL

- 9. NPL and NIM affect the ROA with a significance value below 0.05 which is 0.000 meaning the research hypothesis (Ha) is accepted.
- So that the regression equation obtained is:

 $Y = 1,284 - 0.380 X_1 + 0.206 X_2 + e$  or ROA = 1,284 - 0,384 NPL + 0,206 NIM + e

Tabel 29 Determination Coefficient test

Model Summary

				Std.
			Adjusted	Error of
		R	R	the
Model	R	Square	Square	Estimate
1	.519 <sup>a</sup>	,269	,250	1,10717

a. Predictors: (Constant), NIM, NPL

Based on table 29, the Non Performing Loan (NPL) and Net Interest Margin (NIM) have an effect on Return on Assets of 26.9%.

BUKU 4 Test Results based on the T test table obtained:

Tabel 30 T test Coefficients <sup>a</sup>							
	Unstandardized Coefficients		Standardized Coefficients				
Model	В	Std. Error	Beta	t	Sig.		
1 (Constant)	,714	1,070		,668	,521		
NPL	-,621	,305	-,458	-2,040	,072		
NIM	,486	,167	,654	2,915	,017		

a. Dependent Variable: ROA

- 10. NPL has no effect on ROA with a significance value above 0.05 which is 0.072 because the research hypothesis (Ha) is rejected.
- 11. The NIM has an effect on ROA with a significance value below 0.05 which is 0.017, therefore the research hypothesis (Ha) is accepted.

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ANOVAª						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2,731	2	1,365	5,623	.026 <sup>b</sup>
	Residual	2,186	9	,243		
	Total	4,917	11			

Tabel 31 F test

a. Dependent Variable: ROA

b. Predictors: (Constant), NIM, NPL

12. NPL and NIM affect ROA with a significance value below 0.05 which is 0.026, which means that the research hypothesis (Ha) is accepted.

So that the regression equation obtained is:

 $Y = 0.714 - 0.621 X_1 + 0.486 X_2 + e$  or ROA = 0.714 - 0.621 NPL + 0.486 NIM + e

Tabel 32 Determination Coefficient test

Model Summary

		R	Adjusted R	Std. Error of the	
IVIODEI	ĸ	Square	Square	Estimate	
1	.745 <sup>a</sup>	,555	,457	,49281	

a. Predictors: (Constant), NIM, NPL

Based on table 32 obtained Non-Performing Loans (NPL) and Net Interest Margin (NIM) affect the Return On Assets of 55.50%

# CONCLUSION

Based on the results of the study it can be concluded as follows:

- 1. For BUKU 1 it is obtained that NIM has no effect on ROA this is because Banks in BUKU 1 are generally banks that distribute credit to individuals or to small and medium-sized companies therefore the NIM level is not too large but the NPL is considered to be correct because in general small companies obey in fulfilling their obligations
- 2. Contrary to BUKU 4, it is found that NPL has no effect on ROA, this is because BUKU 4 is a bank with a core capital of more than 30 trillion, meaning that credit is generally given to corporations and large companies so that NPLs are not given much attention, but rather what concerns credit distribution is due productive capital is so high that management is pursuing profit rather than NPL.
- 3. Whereas for BUKU 2 and BUKU 3 in accordance with the rules and regulations issued by the government so that banks can be said to be in a healthy and controlled condition.
- 4. All NPL and NIM BUKU have an influence on the Bank's performance (ROA).

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