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PROFITABILITY ANALYSIS WITH NON-PERFORMING LOAN AS THE MODERATE VARIABLE: THE STUDY CASES OF BANKING COMPANIES IN INDONESIA

This study aims to analyze the effect of bank size and capital adequacy ratio on profitability with non-performing loan ratios as moderating variables in banking companies. This study uses the quantitative research approach with the causality research design. The population of this study is around 45 of the bank's company which was listed on the Indonesia Stock Exchange during 2016–2020 period. The researcher takes only 19 of the bank's company sample with the period of the report for 5 years. The results of the analysis show that the bank size and Capital Adequacy Ratio have a positive and significant effect on profitability in banking companies listed on the Indonesia Stock Exchange during 2016–2020 period by using the bootstrapping method. Then the results analysis of credit risk towards the bank size and Capital Adequacy Ratio are not able to moderate profitability in banking companies that were listed on the Indonesia Stock Exchange during 2016–2020 period by using the bootstrapping method. The conclusion of the research is profitability in the bank's company can be influenced by the size of bank, capital adequacy ratio, and cannot moderate by the credit risk or non-performing loan.

Keywords: the bank size, Capital Adequacy Ratio, profitability, non-performing, loan ratio.

1. INTRODUCTION

The growth and competition that happen in the world of banking, recently experience increasing which made each of the banks must be concerned about the profitability they had. Profitability is important for banks because it can determine their financial performance. Usually, profitability can be measured from the profit that is also known as Return on Asset (ROA). The banks use Return on Asset as an examiner towards the bank's ability to manage the asset they had. Various factors that can influence Return on Assets are the bank size and Capital Adequacy Ratio that moderated as Non-Performing Loan.

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The profitability can give the influence either large or small banks. The size of the bank can be known from the aspect of total assets. The banks, which have the largest total assets been possible to have high profitability, meanwhile the banks which have the smallest total assets been possible to have low profitability. According to Sartono (2010 cited in Anwar, 2018), profitability is a bank's ability to reach the profit related to the sale activity either from the total productive asset or their own capital. Thus, each of the banks will try to increase their profitability because the higher the profitability level of a company, the easier their life will be guaranteed.

In fact, people prefer to choose the large bank to save their money, because they feel apprehensive towards the small bank will be easily liquidated. Usually, the large bank has a huge amount of credit and high credit risk. Furthermore, the credit risk can be known as a Non-Performing Loan (NPL). In this case, both the large and small bank needs to maintain and keep their level of credit risk in order to remain ideal and accordance with the regulations have been established by Bank Indonesia (BI).

Bank Indonesia (BI) is established the obligation to provide the minimum bank's capital as already regulated in Circular Letter of Bank Indonesia No. 2/12/DPNP/2000 regarding the obligation to provide minimum capital to the banks. The bank's capital can be measured by using the Capital Adequacy Ratio (CAR). The bank which has a high CAR is known as the bank that has the ability to produce the higher profit and minimize the credit risk that often happens in the bank. The increase of Non-Performing Loan (NPL) will give a big impact on the bank charges. In this case, if the banks do not improve their profitability, it will give the capital an impact and it can cause the delay towards the growth of the economy and lack of liquidity.

Table 1. Research Phenomenon (Rupiah)

No.	Issuer Code	Year	Asset Total	Capital	The Profit before Tax	Non-Performing Loan
1	AGRO	2016	11.377.960.721.000	1.966.244.530.000	141.265.512.000	234.368.928.000
		2017	16.325.247.007.000	3.175.341.385.000	193.632.796.000	284.434.697.000
		2018	23,313,671,252,000	4.416.738.376.000	292.509.384.000	447.654.022.000
		2019	27,067,922,912,000	4.580.127.430.000	51.061.421.000	1.482.506.840.000
		2020	28,015,492,262,000	4,305,030,498,000	64,071,757,000	968,070,358,000
2	MEGA	2016	70.531.682.000.000	10.883.111.000.000	1.545.423.000.000	329.799.000.000
		2017	82.297.010.000.000	12.072.553.000.000	1.649.159.000.000	377.865.000.000
		2018	83,761,946,000,000	12.619.668.000.000	2.002.021.000.000	458.672.000.000
		2019	100,803,831,000,000	14.684.721.000.000	2.508.411.000.000	442.849.000.000
		2020	112,202,653,000,000	18,037,950,000,000	3,715,053,000,000	542,758,000,000
3	MCOR	2016	12.257.391.000.000	2.125.425.000.000	79.445.000.000	146.559.000.000
		2017	15.788.738.000.000	2.144.650.000.000	75.317.000.000	246.181.000.000
		2018	15,992,475,000,000	2.263.756.000.000	135.618.000.000	280.098.000.000
		2019	18,893,684,000,000	2.852.953.000.000	112.336.000.000	298.208.000.000
		2020	25,235,573,000,000	5,973,602,000,000	63,703,000,000	371,205,000,000

Source of data: (www.idx.co.id).

Table 1 shows that Bank Rakyat Indonesia Agroniaga Tbk, Bank Mega Tbk, and PT. Bank Windu Kentjana International are experiencing asset total increase during 2016–2020.

Bank Rakyat Indonesia Agroniaga Tbk has an asset total around Rp 27,067,922,912,000 in 2019 that increased from the previous year; with the profit before tax around Rp 51.061.421.000 in 2019 that decreased from the previous year and it has the non-performing loan that happened in 2019 around Rp 1.482.506.840.000 that increased from the previous year. Furthermore, Bank Mega Tbk has a capital around Rp 12.619.668.000.000 increased in 2018 from the previous year; with the non-performing loan around Rp 458.672.000.000 that also increased in 2018 from the previous year. Moreover, PT. Bank Windu Kentjana International Tbk also experience an increase towards the asset total, decreasing the profit before tax and the improvement of non-performing load in 2019.

According to the explanation above, this study is conducted to comprehend the influences of credit giving towards the profitability with the Non-Performing Loan as the bank's moderation in the Indonesia Stock Exchange (IDX) during 2016–2020 period.

2. LITERATURE REVIEW

The profitability ratio is a financial ratio to measure the company's potential income. This financial ratio explains the company's success in carrying out the business through the information of the profit already earned. Furthermore, for small companies; this ratio shows their efficiency in carrying out the company (Sudaryono, 2015). Whereas, according to Toni and Silvia (2021), profitability is a ratio to measure the bank's ability in producing the profit with the total asset ratio towards the company. The management efficiency of the company can produce a profit with the use of asset total, either current or non-current assets. Therefore, it can be known that profitability is the measurement device of a bank's ability to produce profit which the direction focuses on the profit and loss balance of the company. Hence, each of the banks can continue to develop their company and be able to pay their obligations due date.

Types of profitability ratios that often used to measure the bank's ability in producing profit are Return on Asset, Return on Equity, Gross Profit Margin, Operating Profit Margin, and Net Profit Margin. Furthermore, the focus of this study is Return on Asset (ROA) which shows the work of investment in giving the profit that accordance with the goal of investment which is actually the same as the company asset had invested (Wijaya et al., 2021). In addition, Juri et al. (2020) stated that ROA is the ratio of profit before the tax (earnings before tax/EBT) for the last 12 months towards the average of business volume in the same period. According to the definition above, it can be known that Return on Asset (ROA) is the measurement device of a bank's ability in producing the profit with the investment that already invested as the total asset it has. There are factors that can influence ROA such as the bank size and Capital Adequacy Ratio which moderate as Non-Performing Loans. Factors that affected ratio Return on Asset are: cash turnover ratio, accounts receivable turnover ratio, and inventory turnover ratio. The function of cash turnover is to measure the level of adequacy of the company's working capital needed to pay bills and finance sales. Receivable Turnover used to measure how long it takes to collect receivables for a period, it can be known that a high receivables turnover ratio reflects the higher quality of receivables. Inventory Turnover used to measure how many times the funds invested in this inventory rotate in one period.

The bank size can be seen in the total asset of the company. The asset is the economic benefit in the future than expected will be achieved by a business entity as the result of the transaction that had been done in the past. Then, assets have a main characteristic that is

a possibility to give the benefit in the future. The total assets are the amount of current assets, long-term investment, fixed assets, and other assets. In addition, with use of the total asset is intended to obtain the bank size or in other words to acquire the bank size with the use of the total assets (Sunyoto, 2013).

The bank size can be determined the conveniences level of the company in achieving the funds from the capital market and bargaining power in the financial contract. Usually, the large company can choose the funds from various forms of debts including the special offering that is more profitable rather than a small company. The bigger amount of funds which are involved, the more possibility to make the contract that planned in accordance with the preference from both of sides, as the replacement from the use of debt standard contract. (Hermawan, Toni, 2021).

Furthermore, the Capital Adequacy Ratio (CAR) or the measurement device of capital adequacy is a net capital ratio in the banks with the whole of total assets (Hidayati, 2015). Meanwhile, according to the Indonesian Banker Association (IBI) (2016), the capital adequacy ratio is the ratio of Minimum Capital Adequacy requirements that must be fulfilled by Banks, the total minimum is around 8%. Then, Fauzi et al. (2020) stated that the capital adequacy ratio (CAR) is the ratio between the total of capital with the total of Risk-Weighted Asset (RWA). The Risk Weighted Asset is the summation of balance sheet assets and administrative assets. RWA of balance sheet assets is obtained by using the multiply of nominal value and the assets which already involved with the risk weight it has (Hasibuan, 2015).

Then, the bank size and capital adequacy ratio are moderate as the credit risk or well known as Non-Performing Loan. According to Umam (2016), NPL shows the cause's existence of problems that happen in output contraction from the one side and the debts load which increasing because of the interest rate increase the other side; hence, it causes the ability of the company to pay the credit is decreased. The consequences of banks are they must be bear the large amount of NPL. This case, can rises the problem from the credit given to the customer which can trigger the existence of credit risk.

3. RESEARCH METHODOLOGY

This study is used the quantitative research approach with the causality research design. Data is collected from the bank's company which was listed in Indonesia Stock Exchange during 2016–2020 that obtained by entering the site; www.idnfinancial.com. This study is done on the first of May-December 2021. The population of this study is around 45 of the bank's company which listed on Indonesia Stock Exchange during 2016–2020 period. Furthermore, the sample is taken by using purposive sampling as the technique to determine the sample with certain consideration (Sugiyono, 2016), with the criteria of the bank's company that listed in Indonesia Stock Exchange during 2016–2020 period have published the financial report and achieved the profit from 2016–2020 consecutively. Then, from 45 companies it can be decided that only 19 of the bank's company sample with the period of the report for 5 years has been chosen.

Data is collected and analyzed by using Partial Least Square (PSL) with the bootstrapping method or random multiplication. Hence, the normality assumption cannot become the problem for PLS. Besides the relation with the normality data; with the use of bootstrapping, PLS cannot require the minimum number of samples. The technique to

collect the data of this study is used the documentation study that often applies as the document that directs into the obvious evidence and other supporting documents.

Research Hypothesis

Hypothesis 1: The bank size influences profitability.
Hypothesis 2: The capital adequacy ratio influences profitability.
Hypothesis 3: Credit risk moderates the influence of bank size on profitability.
Hypothesis 4: Credit risk moderates the influence of capital adequacy ratio on profitability.

4. RESULT

The bank size

The bank size shows the scale of the large or small bank that listed in Indonesia Stock Exchange during 2016–2020 period from the total assets they had. The bank size is measured with the asset logarithm towards as follows.

Table 2. Descriptive Analysis of the Bank Size from the Bank's Company that listed in Indonesia Stock Exchange during 2016–2020 period

No.	Issuer Code	The Bank Size					
		2016	2017	2018	2019	2020	The average
1	AGRO	30.06	30.42	30.78	30.93	30.96	30.63
2	BBCA	34.15	34.25	34.35	34.45	34.61	34.362
3	BBMD	29.99	30.1	30.12	30.19	30.28	30.136
4	BBNI	34.03	34.2	34.33	34.37	34.42	34.27
5	BBRI	34.54	34.66	34.8	34.89	34.95	34.768
6	BBTN	33	33.2	33.36	33.37	33.52	33.29
7	BDMN	32.79	32.81	32.86	32.9	32.93	32.858
8	BJBR	32.26	32.38	32.42	32.45	32.58	32.418
9	BJTM	31.39	31.57	31.77	31.97	32.06	31.752
10	BMAS	29.33	29.43	29.53	29.66	29.94	29.578
11	BMRI	34.58	34.66	34.72	34.82	34.9	34.736
12	BNBA	29.59	29.58	29.62	29.66	29.66	29.622
13	BNII	32.75	32.79	32.81	32.76	32.79	32.78
14	MCOR	30.14	30.39	30.4	30.57	30.86	30.472
15	MEGA	31.89	32.04	32.06	32.24	32.35	32.116
16	NISP	32.56	32.67	32.79	32.83	32.96	32.762
17	PNBN	32.93	32.99	32.96	32.98	33.02	32.976
18	SDRA	30.75	30.93	31.02	31.24	31.27	31.042
19	BTPN	32.15	32.19	32.26	32.83	32.84	32.454
The average		32.05	32.17	32.26	32.37	32.47	

Source of data processed by the Author (2021).

According to the Table 2 shows that the average value of the company size which was measured with the total assets is experienced fluctuate. The bank size with the higher average is Bank Mandiri Tbk with an average value around 34,736. Then, the bank size with the lowest average value is Bank Maspion Indonesia Tbk with the result average value around 29,578.

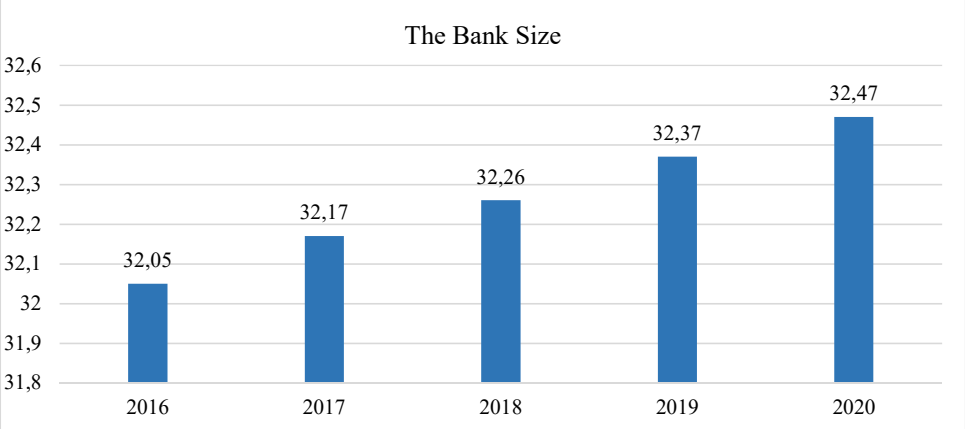

Figure 1. The Development of the Bank Size in the Bank's Company that Listed in Indonesia Stock Exchange

Source of Data processed by the Author (2021).

Figure 1 above shows that the average of the bank size with the total assets of the Bank's company that listed in Indonesia Stock Exchange during 2016–2020 was increased. The average value of the bank size in 2016 was around 32.05, then has increased in 2017 with an average value was around 32.17. Furthermore, in 2018 it has increased with the average value was around 32.36, it is increased in 2019 with an average value around and the bank size in 2020 has also increased was around 32.47. The increase of the bank size that happened is caused by the increase of the total assets owned by the bank's company.

Capital Adequacy Ratio

Capital Adequacy Ratio shows the bank capital of the funds and Risk Weight Assets owned by the bank's company. Then, the capital adequacy ratio can be measured by the ratio of total capital with the risk weight asset. The result of capital adequacy ratio towards the bank's company that listed in Indonesia Stock Exchange during 2016–2020 period can be seen as follows.

According to Table 3, it shows that the average value of capital adequacy ratio which has been measured with the total capital with the risk weight asset is experienced fluctuate. The capital adequacy ratio with the highest average can be found in Bank Mestika Dharma Tbk with an average value around 26.42. Furthermore, the result of capital adequacy ratio with the lowest average can be found in Bank Jabar Banten Tbk with an average value around 18.17.

Table 3. Descriptive Analysis of Capital Adequacy Ratio towards the Bank's Company that listed in Indonesia Stock Exchange during 2016–2020 period

No.	Issuer Code	Capital Adequacy Ratio					
		2016	2017	2018	2019	2020	The average
1	AGRO	23.68	29.58	28.34	24.28	24.33	26.042
2	BBCA	22.21	23.6	23.95	24.64	26.89	24.258
3	BBMD	35.12	35.36	34.58	38.6	47.29	38.19
4	BBNI	22.11	21.15	21.2	19.73	16.78	20.194
5	BBRI	22.91	22.96	21.21	22.55	20.61	22.048
6	BBTN	20.41	18.87	18.21	17.32	19.58	18.878
7	BDMN	22.3	23.24	22.79	24.18	24.98	23.498
8	BJBR	18.43	18.77	18.63	17.71	17.31	18.17
9	BJTM	23.88	24.65	24.21	21.77	21.64	23.23
10	BMAS	24.32	21.59	21.28	20.19	16.53	20.782
11	BMRI	21.36	21.64	20.96	21.39	19.9	21.05
12	BNBA	25.15	25.67	25.52	23.55	25.8	25.138
13	BNII	16.77	17.53	19.04	21.38	24.31	19.806
14	MCOR	19.43	15.75	15.69	17.38	35.28	20.706
15	MEGA	26.21	24.11	22.79	23.68	31.04	25.566
16	NISP	18.28	17.51	17.63	19.17	20.98	18.714
17	PNBN	20.49	21.99	23.33	23.41	29.58	23.76
18	SDRA	17.18	24.86	23.04	20.02	19.99	21.018
19	BTPN	25.03	24.64	25.26	23.51	25.19	24.726
Rata-rata		22.38	22.81	22.51	22.34	24.63	

Source of data processed by the Author (2021).

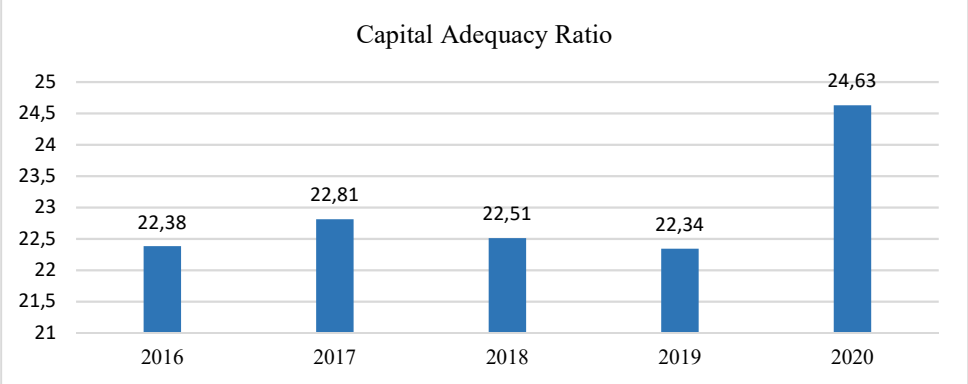

Figure 2. The Growth of Capital Adequacy Ratio towards the Bank's Company that listed in Indonesia Stock Exchange during 2016-2020 period

Source of data processed by the Author (2021).

Then, figure 2 above shows the average capital adequacy ratio which has been measured with the total capital with the risk weight asset toward the bank's company that listed in Indonesia Stock Exchange during 2016–2020 period which experienced increasing and decreasing. The average value of capital adequacy ratio in 2016 around 23.38, then increased in 2017 with an average value around 22.81, but in 2018 it experienced decreasing with an average value around 22.51, it also happened in 2019 which was the capital adequacy ratio is decreased with the average value around 22.51, but in 2020 it was increased with the total value around 24.63. In addition, the increasing and decreasing that happened in capital adequacy ratio can be caused by the increasing or decreasing of the total capital with the risk weight asset owned by the bank's company.

Profitability

Profitability shows the company's ability to produce the company's profit from the assets owned by Bank's company. The variable of profitability in this study is measured by the return on assets. The measurement is the ratio that compares the profit before income tax with the total asset. The result of profitability towards the bank's company that listed in Indonesia Stock Exchange during 2016–2020 can be seen as follows.

Table 4. Descriptive Analysis of Profitability towards the Bank's Company that listed in Indonesia Stock Exchange during 2016–2020 period

No.	Issuer Code	Return On Asset					
		2016	2017	2018	2019	2020	The average
1	AGRO	1.24	1.19	1.25	0.19	0.23	0.82
2	BBCA	3.82	3.89	3.97	3.95	3.12	3.75
3	BBMD	2.27	2.99	2.94	2.56	2.97	2.746
4	BBNI	2.37	2.42	2.45	2.29	0.57	2.02
5	BBRI	3.39	3.29	3.22	3.06	1.77	2.946
6	BBTN	1.55	1.48	1.18	0.13	0.63	0.994
7	BDMN	2.52	3.01	2.64	2.84	1.03	2.408
8	BJBR	1.43	1.42	0.16	1.6	1.54	1.23
9	BJTM	3.37	3.18	2.8	2.43	1.8	2.716
10	BMAS	1.68	1.54	1.42	1.06	0.89	1.318
11	BMRI	1.79	2.41	2.82	2.76	1.63	2.282
12	BNBA	1.5	1.74	1.73	0.93	0.7	1.32
13	BNII	1.57	1.45	1.71	1.54	1.05	1.464
14	MCOR	0.65	0.48	0.85	0.59	0.25	0.564
15	MEGA	2.19	2	2.39	2.49	3.31	2.476
16	NISP	1.7	1.87	2.01	2.15	1.35	1.816
17	PNBN	1.66	1.39	2.21	2.18	1.87	1.862
18	SDRA	1.85	2.2	2.48	1.82	1.82	2.034
19	BTPN	2.85	2.03	2.99	2.21	1.44	2.304
The average		2.07	2.10	2.17	1.94	1.47	

Source of data processed by the Author (2021).

Table 4 shows the average value of Profitability which has been measured with the profit before income tax with the total asset that experienced fluctuation. The highest average of profitability can be found in Bank Central Asia Tbk with an average value around 3.75. Then, the lowest average of profitability can be found in Bank China Construction Bank Indonesia Tbk with an average value around 0.564.

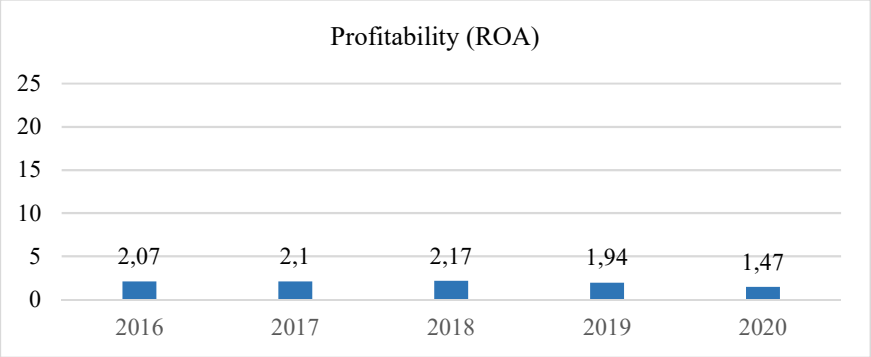

Figure 3. The Growth of Profitability towards the Bank's Company that listed in Indonesia Stock Exchange during 2016-2020 period

Source of data processed by the Author (2021).

Figure 3 shows the average of profitability that has been measured with the profit before income tax and the total asset owned by the bank's company that listed in Indonesia Stock Exchange during 2016-2020 period is experienced increasing and decreasing. The average value of ratio profitability in 2016 is around 2.07, then increased with the average value around 2.10 in 2017, it also increased in 2018 with an average value around 2.17, but in 2018 it decreased with the average value around 1.94, and decreased again in 2020 with the average value around 1.47. Furthermore, the increasing and decreasing of profitability that happened it can be caused by the increasing or decreasing of the profit before income tax and the total asset.

Non-Performing Loan (NPL)

Non-Performing Loan (NPL) shows the impact from the total credit has given to the public. The variable of non-performing loan in this study is measured by the ratio of bad credit with the total credit. The result of non-performing loan towards the Bank's company that listed in Indonesia Stock Exchange during 2016–2020 period can be seen as follows.

Table 4 shows the average value of non-performing loan (NPL) that has been measured by using bad credit and total credit which is experienced fluctuations. The highest average of non-performing loans (NPL) can be found in Bank Rakyat Indonesia Agroniaga Tbk with an average value around 4.206. Furthermore, the lowest average of non-performing loans (NPL) can be found in Bank Tabungan National Tbk with an average value around 0.174.

Table 5. Descriptive Analysis of non-performing loan towards the Bank's company that listed in Indonesia Stock Exchange during 2016–2020 period

No.	Issuer Code	Non Performing Loan (NPL)					
		2016	2017	2018	2019	2020	The Average
1	AGRO	2.87	2.59	2.94	7.66	4.97	4.206
2	BBCA	1.35	1.53	1.45	1.38	1.89	1.52
3	BBMD	2.17	1.39	1.86	0.19	0.59	1.24
4	BBNI	2.34	1.64	0.98	1.3	2.02	1.656
5	BBRI	2.04	2.11	2.16	0.75	0.96	1.604
6	BBTN	2.66	2.53	2.16	2.87	3.78	2.8
7	BDMN	2.35	1.54	2.19	2.21	2.29	2.116
8	BJBR	1.72	1.54	1.68	1.63	1.44	1.602
9	BJTM	4.77	4.59	3.75	0.43	0.71	2.85
10	BMAS	0.81	1.38	2.1	2.27	1.68	1.648
11	BMRI	0.39	0.19	0.29	0.25	0.28	0.28
12	BNBA	1.63	1.26	1.19	1.32	2.44	1.568
13	BNII	2.93	2.08	1.58	2.05	3.3	2.388
14	MCOR	1.78	2.44	2.45	2.15	2.52	2.268
15	MEGA	1.17	1.07	1.09	0.84	1.12	1.058
16	NISP	1.38	1.53	1.07	1.42	0.92	1.264
17	PNBN	2.9	2.88	3.01	3.07	2.99	2.97
18	SDRA	1.53	1.53	1.72	1.02	0.5	1.26
19	BTPN	0.12	0.09	0.25	0.18	0.23	0.174
Rata-rata		1.94	1.78	1.79	1.74	1.82	

Source of data processed by the Author (2021).

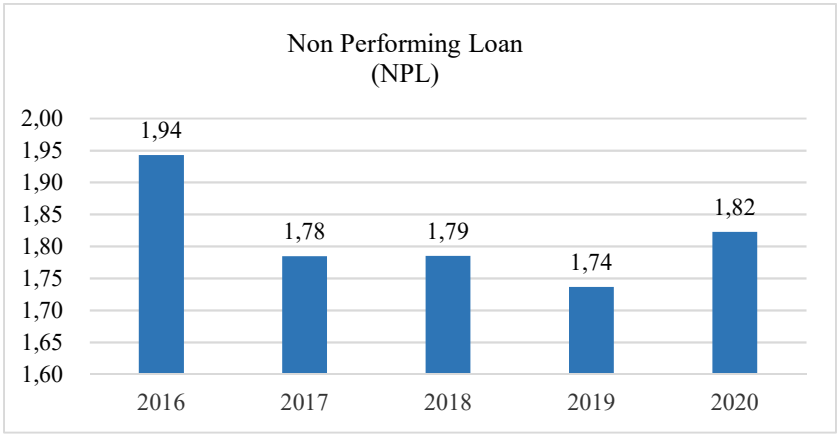

Figure 4. The Growth of Non-Performing Loan (NPL) towards the Bank's Company in Indonesia Stock Exchange during 2016-2020 period

Source of data processed by the Author (2021).

Figure 4 above shows the average of non-performing loans (NPL) that have been measured by using bad credit and total credit towards the Bank's company that was listed in Indonesia Stock Exchange during 2016–2020 period, which is experienced increasing and decreasing. The average value of NPL in 2016 is around 1.94, for the next year in 2017 the average value of NPL is decreased around 1.78, but in 2018 the average value of NPL is increased around 1.78, then the average value of NPL has decreased again around 1.74 in 2019, however the average value of NPL has increased again around 1.82 in 2020. Therefore, the increasing and decreasing of NPL happened because of the increasing or decreasing of bad credit or total credit.

Hypothesis Test Results

The forward analysis that must be done is the hypothesis test towards the data. This analysis is done by using the ratio of T-table value and T-statistics as the result from bootstrapping in Partial Least Square (PLS). Then, the hypothesis has been achieved if the value of T-statistics is higher rather than the value of T-table (95-2 = 93) (1,985) with the significant level around 5% or through the P-value α = 5%, p-val = 0,05. The result of bootstrapping PLS can be seen as follows.

Table 6. Hypothesis Test Results

	Sample Original (O)	Mean Sample (M)	Deviation Standard (STDEV)	T-Statistics (0/STDEV)	P-values
The Bank Size → ROA	0,500	0,509	0,075	6,673	0,000
CAR → ROA	0,470	0,482	0,122	3,847	0,000
NPL → ROA	-0,207	-0,202	0,112	1,840	0,066
Moderating Effect of The Bank Size → ROA	0,086	0,082	0,118	0,732	0,465
Moderating Effect of CAR → ROA	0,071	0,055	0,170	0,421	0,674

Source of data processed by the Author (2021).

According to the Table 6 above, it can be seen that the value of P-values is influence the bank size to the profitability, then the credit risk or NPL influence the profitability is 0,000 which means positive significant influence, and 0,066 which means not significant influence but it has positive direction. Furthermore, the P-value of credit risk or NPL moderating the bank size to the profitability around 0,465 where it was higher rather than 0,05 which means the credit risk or NPL cannot be able to moderate the bank size towards the profitability.

The P-values of credit risk moderating capital adequacy ratio towards the profitability around 0,674 where it was higher rather than 0,05 which means the credit risk or NPL cannot be able to moderate the capital adequacy ratio towards the profitability. Furthermore, it can be seen that the P-values between the influence of capital adequacy ratio to the profitability is 0,000 lower rather than 0,05 which means it can give the positive significant influence.

Hypothesis 1: The bank size influences profitability

According the result analysis in the table 5, it can be seen that df = n-k-1 = 95-2--1 = 92 (1,980). Hypothesis test result influence the bank size with the profitability which has the parameter coefficient around 0,500 with the value significances of T-statistics 6,673 > 1,980 and P-values is 0,000 < 0,05. It shows that the bank size gives the positive significant influences on the profitability.

Hypothesis 2: The capital adequacy ratio influences profitability

Then another result of table 5 shows that the path coefficient between capital adequacy ratio to the profitability has the parameter coefficient around 0,470 with the significances value of T-statistics 3,847 > 1,980 and P-value around 0,000 < 0,05. It shows that the capital adequacy ratios give the significant influence on profitability.

Hypothesis 3: Credit risk moderates the influence of bank size on profitability

Another result from the table 5 shows that the hypothesis test result concerned about the influence of credit risk or NPL moderates the bank size on the profitability has the parameter coefficient around 0,086 with the significances value of T-statistic 0,732 < 1,980 and P-value around 0,465 > 0,05. It indicates that credit risk or NPL was not moderate the influence of bank size on profitability.

Hypothesis 4: Credit risk moderates the influence of capital adequacy ratio on profitability

In addition, the other result analysis shows that the hypothesis result concerned about the influence of credit risk or NPL which moderating capital adequacy ratio on profitability has a parameter coefficient around 0,071 with the significances value of T-statistics around 0,421 < 1,980 and P-values around 0,674 > 0,05. It indicates that the credit risk or NPL was not moderate the capital adequacy ratio on profitability.

5. DISCUSSION

The bank size influences profitability

The result of this study stated that the bank size was given a positive influence and significant on the profitability which means, the bigger the size of the bank the larger profitability will produce. The bank size has the bigger total assets which came from their own capital and the large funds from the third side. With the bigger of total assets, the bank can distribute the large credit; hence it can give an impact on the profitability.

This result is in accordance with the theory proposed by Sunyoto (2013), the company size is measured from the size either big or small of the company. Generally, investors are interested in the big company because they had good management, especially the performance. The investor expects to achieve the highest profit therefore; the investor often chooses the large company. Furthermore, the small company that has been chosen by the investor with the reason easily to be detected by the investor, hence the investor can be observed directly to see the growth of profit or return on the small company.

Then, this result also accordance with the result done by Steven and Toni (2020) that conducted the study about the bank's company that was listed in Indonesia Stock Exchange during 2014–2018 period, with the result that the bank size was given positive influences and significant on the profitability.

According to the explanation above it can be known that the bank size gives a positive influence and significant on the profitability because the big company is relatively more stable and able to produce the profit rather than the small company which can be seen from the assets they had.

The capital adequacy ratio influences profitability

The result analysis stated that the capital adequacy ratio was given a positive influence and significant on the profitability which means the bigger the capital adequacy ratio the larger the profitability is. The bank's company that has bigger capital adequacy ratio reflected the banks which are stable and strong, hence it increases the public confidence to save their money to the bank they had to choose. With the use of their own capitals and the funds from the third side, it shows that the bank had the ability to distribute the larger credit to the debtor side and it can influence the profitability.

This result is in accordance with the theory proposed by Mohammad (2014), generally the bank is an institution that existed with the profit orientation; therefore, to establish the institution, it needs the aspect of strong capital. Furthermore, this result study also in accordance with the previous study by Parasthiwi and Budiasih (2019) which took the data from the Indonesia Stock Exchange during 2013–2017 period to be analyzed. The result of it was the variable of capital adequacy ratio was given positive significant influence on the profitability.

According to the explanation above, it can be known that the capital adequacy ratio was given positive influence and significant on the profitability because the bank's company has the capital adequacy ratio to do their management and operation. The bank's capital came from their own capitals and the funds from the third side. This capital will be used to distribute to the public. The bigger the funds are distributed into a credit with the principle of circumspection, the greater the profitability of the banking sector will be achieved.

Credit risk moderates the influence of bank size on profitability

According to the result of this study, credit risk was not moderate the influence of bank size on profitability because the higher asset the banks had does not mean they had credit risk, hence it cannot impact the increase of profitability.

This result is in accordance with Anggawulan and Suardikha (2021) stated credit risk or NPL was not moderate the bank size to ROA. However, this result is contrary to the study by Dewi (2019) stated that the credit risk or NPL moderated the negative relation between the bank size and ROA from the data which has taken from Indonesia Stock Exchange during 2013–2017 period, with the total of data around 44 companies.

According to the explanation above, it can be known the credit risk was not moderate the influence of bank size on profitability. It can happen because either the large or small banks are able to minimize the credit risk they had, therefore it cannot cause the bank size influence on profitability. It can be seen from the ratio average of credit risk that was listed in Indonesia Stock Exchange during 2016–2020, which is most of the company has the credit risk or NPL less than 5%. This means that regardless of the size of the banking company in Indonesia, if the companies are able to reduce their credit risk, it will not influence the bank size on profitability.

Credit risk moderates the influence of capital adequacy ratio on profitability

The result analysis of credit risk was not moderate influence the capital adequacy ratio on profitability because the bank's company is able to minimize the credit risk. This result is in accordance with the study by Lestari (2019) which showed that the credit risk did not influence the relation between capital adequacy ratios (CAR) with the profitability. It happened because the bigger amount of credit risk in the company the higher the credit risk will be experienced. Furthermore, credit risk or NPL was not influenced the capital adequacy ratio on the profitability because the bank listed on Indonesia Stock Exchange has an average of credit risk or NPL less than 5% (Anggawulan, Suardikha, 2021). According to the explanation above, it can be known that credit risk did not influence the capital adequacy ratio on profitability.

6. CONCLUSION

This study is aimed to know and understand the influence of bank size, capital adequacy ratio, and credit risk or NPL on profitability towards the bank's company listed in the Indonesia Stock Exchange during 2016–2020 period. The result of this study shows that the bank size influences the profitability of the bank's company listed in the Indonesia Stock Exchange during 2016–2020 period. Also, it happened with the capital adequacy ratio which influence the profitability of the bank's company listed on the Indonesia Stock Exchange during 2016–2020 period. Meanwhile, the credit risk was not able to moderate the bank size and capital adequacy ratio on profitability towards the bank's company listed in the Indonesia Stock Exchange during 2016–2020 period. Therefore, it can be concluded that profitability in the bank's company can be influenced by the size of bank, capital adequacy ratio, and cannot moderate by the credit risk or non-performing loan.

In addition, the suggestion for further study is to add the independent variable or replace the variable with another moderate on profitability. Then, the writer also gives the suggestion for further study to do the research for business sectors such as manufacturing companies, real estate/property, other financial companies, and willing to do long research.

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