Journal of Applied Finance & Banking, Vol. 10, No. 1, 2020, 153-166
ISSN: 1792-6580 (print version), 1792-6599(online)
Scientific Press International Limited

Determinants of Bank Profitability with Size as Moderating Variable

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Abstract

This paper has objective to explore determinant of bank profitability with size as moderating variable. Internal ratio and macroeconomics variable are used to determine bank profitability. Return on Asset and Return on Equity are variable of bank profitability. Model Panel Data is used to determine bank profitability in Indonesia for period of 2007 to 2018. This research found that Net Interest Margin, Ratio of Operational Expenses to Operational Profit, Capital Adequacy Ratio and Loan to Deposits Ratio significantly affected profitability bank of return of Equity. Fed Rate and Consumption of Cement significant affected bank profitability of return on asset. Net Interest Margin, Non-Performing Loan, Ratio of Operational Expenses to Operational profit, and Loan to Deposits Ratio significantly affected profitability bank of Return on Equity. Consumption of Cement significant affected bank profitability of Return on Equity. Asset as moderating variable with CAR, BOPO, Consumption of cement and Fed Rate have significant to affect bank profitability of return on assets. Asset with Consumption of cement has and negative significant to affect bank profitability of Return on Equity.

JEL classification numbers: G1, G21, E58

Keywords: Profitability bank, Return on Asset, Return on Equity, Net Interest Margin, Non-Performing Loan, Capital Adequacy Ratio, Loan to Deposit Ratio, Oil Price, Exchange Rate, Fed Rate and Consumption of Cement.

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Article Info: Received: December 27, 2019. Accepted: January 15, 2020. .
Published online: April 1, 2020.

1. Introduction

Bank is a sector in economic of a nation to get special attention for policy maker. Allen and Carletti (2010) stated that bank has big role in financial system and a fundamental issue in economic theory and finance. Sukarman (2014) stated that Bank has big role in Indonesia's economy since independency to current. Asset and Loan are indicator to show role and growing the banking sector. Asset increased by 13,89% p.a. for period 2006 to 2018. Loan increased by 17.27% p.a. for similar period to Asset. Besides two indicator, net Profit bank also grew 14,90% pa for period 2006 to 2018. It means that bank mostly get profit.

Explanation above, it show about bank profitability in Indonesia and growing rapidly. Saeed (2014) investigates the impact of bank-specific, industry-specific, and macroeconomic variables on bank profitability before, during, and after the financial crisis of 2008. Brahmaiah and Ranajee (2018) studied about factors influencing Profitability of Banks in India such as Strength of equity capital, operational efficiency, ratio of banking sector deposits to the gross domestic product (GDP), had significantly positive effect on profitability of banks and credit risk, cost of funds, non-performing assets (NPA) ratio and consumer price index (CPI) inflation. Fani et.al (2018) studied about Impact of Internal and External Factors on Bank Performance in Pakistan. Lutf and Omarkhil (2018) studied about Impact of Macroeconomic Factors on Banking Profitability. Menicucci and Paolucci (2016) explored the determinants of bank profitability in European banking sector. Hoffmann (2011) studied about Determinants of the Profitability of the US Banking Industry. Sufian (2009) investigated the determinants of bank profitability in a developing economy, case study Malaysian financial sector during the period 2000-2004. Almaqtari et.al (2018) investigated the determinants of profitability of Indian commercial banks using A panel data approach.

Economic growth has positive impact to profitability of bank in a nation. Economic growth could also be stated by industry growth especially in construction industry. Industry Specific become a variable to affect bank profitability, stock price and others. Consumption of cement is always used to see economic growth. Anthanasoglou et.al (2006) investigated Bank-specific, industry-specific and macroeconomic determinants of bank profitability. Bahtiar and Manurung (2019) used consumption of cement to investigate its relationship to stock price.

Government always take a policy to push an industry to grow economic a nation. Policy could be different from one period government to another period government. Some time, the policy does not directly affect the industry, but government issued a regulation to an industry to push another industry that has related to industry. This research use dummy variable to capture policy that issued by government.

Asset Bank could also affect bank profitability, but some researcher using it as moderating variable. Manurung (2019) stated that moderating variable could be to strong or to weak relationship between dependent variable and independent variable.

Mahmood et.al (2019) investigated Moderating Effects of Firm Size and Leverage on the Working Capital Finance–Profitability Relationship: Evidence from China. Badara (2016) explored the moderating effect of firm size on the relationship between Board Structure and Financial Performance of Deposit Money Bank in Nigeria. Muigai and Muriith (2017) investigated he Moderating Effect of Firm Size on the Relationship between Capital Structure and Financial Distress of Non-Financial Companies Listed.

Based on the above explanation, this paper want to investigate impact of internal factor and external factor to bank profitability in Indonesia bank. Asset bank will be used as moderating variable in the model. This research will use annual data since 2007 to 2018. Next explanation will discuss about theoretical review.

2. Theoretical Review

Bank is intermediary institution that has objective to get profit. As a bank, they collected money from the surplus unit and distribute to deficit units, and the bank get margin. Bank need the high capital to operate it. The Capital of Bank will grow as much as profit that bank be gotten it. Then, the capital bank could be arranged as follows:

$$\left.\begin{aligned} E_1 &= E_0 + \pi_1 \\ E_2 &= E_1 + \pi_2 = E_0 + \{\pi_1 + \pi_2\} \\ E_n &= E_0 + \{\pi_1 + \pi_2 + \ldots + \pi_n\} \end{aligned}\right\} \quad (1)$$

E_1 is capital bank on year – 1 and grow from on year – 0 by profit (π_1) then it grow again by profit on year – 2 (π_2), so total Capital become E_2 as mention in equation (1).

Bank could increase their capital through profit ($\pi_1, \pi_2, \ldots \pi_{\sim}$) and issue shares to other people or public (Svitek, 2001), and also issue long term debt is known Subordinate Debts (Kleff dan Weber, 2008). Profit of the bank could be calculated as follows:

$$\pi = (1-T)(r*L - i*D) \quad (2)$$

T = tax
L = Loan
r = rate of Loan
i = rate of deposits

If L = (1 – α)*E + D, which is α as reserve requirement by central bank that it provide by bank (Jiang, 2010). Then, equation (2) could be rewrite as follows:

$$\pi = (1-T)*[r*\{(1-\alpha)*E+D\}-i*D]$$

$$\pi = (1-T)*[\{E*(1-\alpha)\}*r+\{r-i\}*D] \quad (3)$$

$$\frac{\pi}{E} = (1-T)*[\{(1-\alpha)*r\}+\{r-i\}*\frac{D}{E}]$$

(π / E) is known as Return on Equity (RoE). If we want to make equation (3) to become (π / A), is known as return on asset (RoA), Equation 3 could be rewrite as follows:

$$\frac{\pi}{A} = (1-T)*[\{(1-\alpha)*r\}\frac{E}{A}+\{r-i\}*\frac{D}{A}] \quad (4)$$

If E = A – D, so Equation (4) could be rewritten as follows:

$$\frac{\pi}{A} = (1-T)*[\{(1-\alpha)*r\}+\{(1-\alpha)*r+(r-i)\}*\frac{D}{A}] \quad (5)$$

Equation (3) dan (5)[4] are center of problem of this research. If we want to maximize for each RoA and RoE, then we could derive first order for equation (3) with (D/E) and equation (5) with (D/A).

3. Methodology

3.1 Model

Based on the previous explanation, this research want to explore internal and external factor to determine bank profitability and there is size variable as moderating variable. The Model is as follows:

$$RoA_{i,t} = a_0 + b_1\, NPL_{i,t} + b_2\, NIM_{i,t} + b_3\, BOPO_{i,t} + b_4\, CAR_{i,t} + b_5\, LDR_{i,t}$$
$$+ b_6\, Aset_{i,t} + b_7\, Kurs_t + b_8\, OILP_t + b_8\, Semen_t + b_{10}\, Fed_t$$
$$+ b_{11}\, D_1 + b_{12}\, D_2 + b_{13}\, NPL_{i,t}*Aset_{i,t} + b_{14}\, NIM_{i,t}*Aset_{i,t}$$
$$+ b_{15}\, BOPO_{i,t}*Aset_{i,t} + b_{16}\, CAR_{i,t}*Aset_{i,t} + b_{17}\, LDR_{i,t}*Aset_{i,t}$$
$$+ b_{18}\, Kurs_t*Aset_{i,t} + b_{19}\, OILP_t*Aset_{i,t} + b_{20}\, Semen_t*Aset_{i,t}$$

[4] Equation (3) and (5) could be done other people or academician. We only to show how it done in this research.

$$+ b_{21}\ Fed_t*Aset_{i,t} + e_1 \quad (6)$$

$$RoE_{i,t} = a_0 + b_1\ NPL_{i,t} + b_2\ NIM_{i,t} + b_3\ BOPO_{i,t} + b_4\ CAR_{i,t} + b_5\ LDR_{i,t}$$
$$+ b_6\ Aset_{i,t} + b_7\ Kurs_t + b_8\ OILP_t + b_8\ Semen_t + b_{10}\ Fed_t$$
$$+ b_{11}\ D_1 + b_{12}\ D_2 + b_{13}\ NPL_{i,t}*Aset_{i,t} + b_{14}\ NIM_{i,t}*Aset_{i,t}$$
$$+ b_{15}\ BOPO_{i,t}*Aset_{i,t} + b_{16}\ CAR_{i,t}*Aset_{i,t} + b_{17}\ LDR_{i,t}*Aset_{i,t}$$
$$+ b_{18}\ Kurs_t*Aset_{i,t} + b_{19}\ OILP_t*Aset_{i,t} + b_{20}\ Semen_t*Aset_{i,t}$$
$$+ b_{21}\ Fed_t*Aset_{i,t} + e_2 \quad (7)$$

RoA = Net Profit / Total Asset

RoE = Net Profit / Total Equity

4. Estimation Model

This research use Model data Panel to estimate relationship some independent variable to determine bank profitability as dependent variable. Model Data Panel is appropriate for data small which short time series and small company as sample. Besides that, model data panel also show time and the cross-section as sample. Gujarati (2003) and Wooldridge (2002) and Sul (2019) stated model data panel is as follows:

a. Pooled Data Model

Pooled Data Model is model that data combine all together and the model is as follows:

$$Y_{i,t} = \beta_1 + \beta_2 X_{2i,t} + \beta_3 X_{3i,t} + \mu_{i,t} \quad (9)$$

i = 1, 2, … , k
t = 1, 2, … , n

X's are non-stochastic and $E(\mu_{it}) \sim N(0, \sigma^2)$

b. Fixed Effect Model

FEM is a model that μ_i and X's are assumed correlated.

$$Y_{i,t} = \beta_{1i} + \beta_2 X_{1i,t} + \beta_3 X_{2i,t} + \mu_{i,t} \quad (10)$$

i = 1, 2, … , k
t = 1, 2, … , n

c. Random Effect Model (REM)

REM is a model that ε_i and X's are assumed uncorrelated.

$$Y_{i,t} = \beta_{1i} + \beta_2 X_{1i,t} + \beta_3 X_{2i,t} + \mu_{i,t} \quad (11)$$

$$\beta_{1i} = \beta_1 + \varepsilon_i$$

i = 1, 2, … , k

t = 1, 2, … , n

μ_i is a random error with a mean value of zero and variance of σ_ε^2.

Judge (1982) and Biorn (2017) stated that how we choose FEM or REM as follows:

1. FEM may be preferable, when T (number of time series data) is large and N (the number of cross-sectional units) is small.
2. When T is small and N is large, if we strongly believe that the individual, or cross-sectional, units in our sample are not random drawings from a larger sample, FEM is appropriate. If the cross-sectional units in the sample are regarded as random drawings, the REM is appropriate.
3. FEM is an unbiased estimator, when individual error component ε_i and one or more regressors are correlated.
4. REM estimators are more efficient than FEM Estimators, when N is large and T is small and if the assumptions underlying REM hold.

5. Data

Data for this research was collected from the company that they published to public in newspaper or their website as mandatory requirement from government and Indonesia Stock Exchange, but macroeconomics data is obtained from Central Bank of Indonesia . Data is annually data that collected for period of 2007 to 2018, that only twenty-six companies have financial statement for the period. Then, Return on Asset (Y), Net Interest Margin (NIM), Non-performing Loan (NPL), Capital Adequacy Ratio (CAR), Operational Cost to Revenue (BOPO), Total Asset (Aset) and Exchange Rate (KURS), Oil Price (OILP), Consumption of Cement (Semen) and Fed Rate are calculated that is based data collection. Data Exchange Rate, OIL Price, Consumption of Cement, are transformed to logarithma natural, when model run by Eviews.

6. Result

This research have two analysis such as descriptive analysis to become first explanation, and internal and external factor to determine profitability of bank to become second explanation after descriptive analysis.

6.1 Descriptive Analysis

In this subsection, this research discusses about descriptive statistics of this research

variable that is shown by Table 1 at below. Average Return on Assets is 1.4% p.a and standard of deviation is 2.33%. These figure look small, but standard of deviation of ROA is very small. Average of ROE of all bank is 6.95% and it has high standard deviation of 63.94%. The average of ROA is similar to compare to time deposits rate. It means, the investment in share of bank could not compensate risk of investor's tolerance. Net interest margin (NIM) of bank has average of 5.64% and standard of deviation of 2.6%. This NIM is highest than previous research, but fluctuation among bank is quite small. This data also show that banks have high competition in the market. Ratio Operational Expenses to operational revenue has 86.84% and standard deviation 18.89%. It show that bank has profit from the business operational but the variation among bank is too high. Non-performance Loan (NPL) has average 2.11% and standard of deviation of 2.14%. Mostly bank has to maintain NPL around 2% because it required Central Bank. Capital Adequacy Ratio (CAR) has average 18% and standard of deviation of 6.8%. This ratio look good for bank because the figure is above the regulation requirement. Bank should maintain this figure to get better operational and to fulfill regulation. Loan to Deposits Ratio (LDR) has average of 80.66% and standard of deviation of 15.67%. This figure reflected fluctuation LDR of Bank. Bank should maintain this figure around 85% from total third-party fund, because bank need money to operate treasury department and investment to zero risk instrument such as government Bonds.

Table 1: Descriptive Statistic of Empirical Variable

											Consumption	
	ROA	ROE	**NIM**	**BOPO**	**NPL**	**CAR**	**LDR**	**Asset**	EX	OILP	Cement	FED Rate
Minimum	-12.90%	-981.63%	0.24%	33.28%	0.00%	-22.3%	0.65%	1,168.00	8,996.00	37.04	34,174.70	0.5%
Maximum	6.10%	402.86%	16.64%	195.70%	20.51%	52.7%	145.26%	1,296,898.00	14,390.00	98.56	69,565.13	5.3%
Median	1.66%	10.65%	5.17%	85.31%	1.60%	16.8%	83.73%	29,900.78	11,544.37	69.25	56,464.26	0.5%
Average	1.40%	6.95%	5.64%	86.84%	2.11%	18.0%	80.66%	34,582.88	11,274.83	66.48	51,273.94	1.6%
STDEV	2.33%	63.94%	2.60%	18.89%	2.14%	6.8%	15.67%	5.93	1.20	1.43	1.28	1.9%
Skewness	-2.54	-11.31	1.15	1.98	3.88	1.17	-0.90	1.06	0.98	0.74	0.62	1.31
Kurtosis	10.26	189.31	1.75	7.79	24.42	9.29	4.91	0.37	0.15	0.21	0.24	-0.24
Jarque Berra	1021.103	457910.93	89.68584	502.5942	6750.371	585.0536	89.53587	148.8619732	156.0352	130.2803	119.0948	225.688

Source: Processing by Researcher

Asset of the bank has average of IDR 34 trillion and standard of deviation of 5.93%. This figure show that there is to many small bank, even there is some bank that has

highest asset. The highest asset of bank is IDR 1,297 trillion as shows in Table 1. As mentioned before, this research also included macroeconomic variables to affect bank profitability. Exchange rate has average of IDR 11,274, maximum of IDR 14,390 and standard of deviation of 1.20. This figure show that exchange rate does not fluctuate very high. Mostly fluctuation exchange rate is not more than 5% p.a. but it some time could be more than 5%. Oil Price has average of US$ 66.48 per barrel and standard deviation of 1.43. It means that the fluctuation is small. Consumption of cement has average of 51,273.94 ton per year and standard of deviation of 1.28. The fluctuation of consumption of cement is too small because the maximum of consumption of cement is near to figure of average. Fed Rate has average of 1.6% and standard of deviation of 1.9%. This figure show that US maintain the rate to push economic to become better.

Based on this subsection analysis, there is a weakness to avoid for next future research which is the outlier data within research period. The future research should avoid the outlier data even the bank has operation and product in the market. Previously the bank has outlier indicator compared to current position. If the next researcher avoid the weakness this research, it might made different result. But this research still show the factual situation in the banking sector. Government could issue a policy to push bank to operate more efficient and profitability.

6.2 Internal and external Factors

This subsection will discuss the internal and external factor to determine the profitability of bank in Indonesia. The bank profitability is Return on Assets and Return on Equity.

6.3 Return on Assets

As mentioned before, that this research want to explore determinant of profitability bank. In this section, we use Return on Asset as variable profitability bank. Model Panel Data is used to determine the coefficient of model because the unit analysis draw by purposive sampling. Internal ratio as variable independent is NIM, NPL, BOPO, CAR and LDR. Coefficient of determination is 91,87%, that means the fluctuation of all variable could explain fluctuation of profitability of bank by 91,87% and the remain is by other variable (see Table 2). Variable of NIM, BOPO, CAR and LDR significantly affected profitability of bank at level of significant of 10% (see Table 2). NPL does not significant affected profitability of bank at level of significant of 10%. Variable of Asset as a moderating variable also does not significant affected profitability of bank at level of significant of 10%. This result is support the theory bank profitability or as expected.

External variable such as Exchange rate, oil price, fed rate and consumption of cement are also explored to determine profitability of bank. Exchange Rate and Oil Price did not significant affected profitability of bank, but Fed Rate and Consumption of Cement significant affected profitability of bank at level of significant of 10%. This result is as expected to the theory of profitability of bank.

As mentioned above that asset does not affected profitability of bank. Asset as moderating Variable has significant to affect profitability of bank with CAR, BOPO, Consumption of cement and Fed Rate. CAR and BOPO with Asset as moderating variable have positive significant to profitability of bank, but Consumption and Fed Rate have negative significant to profitability of bank.

Based on this explanation, this research support previous research. Government could issue a policy to improve profitability of bank through internal factor such as Net Interest Margin (NIM), Capital Adequacy Ratio (CAR), ratio operational expenses to operational revenue (BOPO); and Loan to Deposits Ratio (LDR). Government should not take a policy about asset to improve profitability of bank. Asset is total item that bank owned its operation, so the result indicate factual situation.

Table 2: Coefficient of Regressor of Return on Assets

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.101099	0.31243	-0.323588	0.7465
NIM?	0.336811	0.201755	1.669408	0.0962
NPL?	-0.135869	0.165125	-0.822829	0.4113
CAR?	-0.12164	0.037087	-3.279801	0.0012
BOPO?	-0.152011	0.020977	-7.246562	0
LDR?	0.056112	0.031803	1.76438	0.0788
ASET?	0.024368	0.029589	0.823548	0.4109
KURS	-0.078378	0.050877	-1.540524	0.1246
OILP	0.002853	0.012901	0.22119	0.8251
FED	1.043087	0.390466	2.67139	0.008
SEMEN	0.082419	0.044453	1.854066	0.0648
D1	-0.006639	0.008015	-0.828351	0.4082
D2	-0.000548	0.001702	-0.321953	0.7477
NIM?*ASET?	-0.034129	0.022196	-1.537615	0.1253
NPL?*ASET?	0.011641	0.019444	0.598676	0.5499
CAR?*ASET?	0.011786	0.003601	3.273201	0.0012
BOPO?*ASET?	0.006507	0.002272	2.864299	0.0045
LDR?*ASET?	-0.005041	0.003154	-1.598002	0.1112
KURS*ASET?	0.006333	0.004785	1.32348	0.1868
OILP*ASET?	-0.000151	0.001214	-0.124762	0.9008
SEMEN*ASET?	-0.007526	0.004254	-1.769382	0.078
FED*ASET?	-0.082294	0.030516	-2.696784	0.0074
Fixed Effects (Cross)				
_1--C	0.002564			
_2--C	0.005856			
_3--C	-0.004373			
_4--C	0.00016			
_5--C	-0.003454			
_6--C	-0.001989			
_7--C	0.012257			
_8--C	-0.006239			
_9--C	0.003167			
_10--C	-0.009104			
_11--C	0.00183			
_12--C	-0.001165			
_13--C	0.006807			
_14--C	-0.001466			
_15--C	-0.003532			
_16--C	-0.004585			
_17--C	0.0084			
_18--C	0.011767			
_19--C	0.002123			
_20--C	-0.004384			
_21--C	0.000469			
_22--C	-0.003022			
_23--C	0.000635			
_24--C	-0.005123			
_25--C	-0.006436			
_26--C	-0.001161			

R-Squared = 91,87%

Central bank should also consider external factor such as the fed rate fluctuation to improve bank profitability. Fed Rate has significant factor to affect bank profitability. If Central Bank of USA give signal to increase or decrease interest rate, government of Indonesia should give quick action to anticipate action Central bank

of USA. Another external variable should be consider such as Consumption of Cement, because this data cannot be controlled by government. If the consumption is starting to drop, Government should issue a regulation to improve the profitability of bank.

6.4 Return on Equity

As mentioned before, that this research want to explore determinant of bank profitability. In this section, we use Return on Equity as variable bank profitability. Model Panel Data is used to determine the coefficient of model because the unit analysis draw by purposive sampling. Internal ratio as variable independent is NIM, NPL, BOPO, CAR and LDR. The result of RoE Model show in Table 3 at below. Coefficient of determination is 81,62%, that means the fluctuation of all variable could explain fluctuation of profitability of bank by 81,627% and the remain is by other variable. This Coefficient of determination is less than the coefficient of determination of RoA. Variable of NIM, NPL BOPO, and LDR significantly affected profitability of bank at level of significant of 10%. CAR does not significant affected profitability of bank at level of significant of 10%. Variable of Asset as a moderating variable also significant affected profitability of bank at level of significant of 10%.

External variable such as Exchange rate, oil price, fed rate and consumption of cement are also explored to determine profitability of bank. Exchange Rate, Oil Price and Fed Rate did not significant affected profitability of bank, but Consumption of Cement significant affected profitability of bank at level of significant of 10%.

Table 3: Coefficient of Regressor of Return on Equity

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-7.089493	3.222037	-2.200314	0.0286
NIM?	5.086194	1.586027	3.206876	0.0015
NPL?	-3.893576	2.080295	-1.871646	0.0624
CAR?	0.088199	0.573839	0.1537	0.878
BOPO?	-0.808362	0.245897	-3.287394	0.0011
LDR?	-0.603252	0.308957	-1.952541	0.0519
ASET?	0.842154	0.282598	2.980044	0.0031
KURS	-0.137787	0.523748	-0.26308	0.7927
FED	4.765133	3.681338	1.294402	0.1967
OILP	0.001452	0.129205	0.011235	0.991
SEMEN	0.848963	0.457661	1.855002	0.0647
D1	-0.014375	0.05342	-0.269099	0.7881
D2	0.003681	0.011342	0.324533	0.7458
NIM?*ASET?	-0.556896	0.169515	-3.285234	0.0012
NPL?*ASET?	0.252529	0.1991	1.268354	0.2058
CAR?*ASET?	-0.008518	0.055672	-0.153009	0.8785
BOPO?*ASET?	0.018513	0.022955	0.806515	0.4207
LDR?*ASET?	0.054941	0.028577	1.922529	0.0556
KURS*ASET?	0.00677	0.04502	0.15037	0.8806
OILP*ASET?	-0.000598	0.011159	-0.053607	0.9573
FED*ASET?	-0.410108	0.28437	-1.442163	0.1504
SEMEN*ASET?	-0.084416	0.039818	-2.120034	0.0349
Fixed Effects (Cross)				
_1--C	0.040161			
_2--C	-0.004691			
_3--C	0.024201			
_4--C	0.03071			
_5--C	0.059541			
_6--C	0.0012			
_7--C	0.156978			
_8--C	-0.576595			
_9--C	0.0554			
_10--C	-0.052834			
_11--C	0.03572			
_12--C	0.015325			
_13--C	-0.016556			
_14--C	-0.014802			
_15--C	0.009173			
_16--C	0.006995			
_17--C	0.069898			
_18--C	0.103553			
_19--C	0.02336			
_20--C	0.023379			
_21--C	0.0534			
_22--C	-0.011346			
_23--C	0.06311			
_24--C	-0.0473			
_25--C	-0.066649			
_26--C	0.018671			

R-Squared = 81.62%

As mentioned above that asset affected profitability of bank. Asset as moderating Variable with Consumption of cement has significant to affect profitability bank, but Exchange rate, Oil Price and Fed Rate with Asset as moderating variable in model did not affected profitability of bank of ROE. Consumption of cement as moderating variable have negative significant to affect to profitability of bank of RoE.

7. Conclusion

Based on discussion above, this paper conclude as follows:

1. RoA has average of 1.4% and standard deviation of 2.33% and RoE has average of 6.95% and standard of deviation of 63.94%. Fluctuation of RoE is to far higher than ROA.
2. Net Interest Margin, Ratio of Operational Expenses to Operational Profit, Capital Adequacy Ratio and Loan to Deposits Ratio significantly affected profitability of bank of return of Equity. Fed Rate and Consumption of Cement significant affected profitability of bank of return on asset.
3. Net Interest Margin, Non-Performing Loan, Ratio of Operational Expenses to Operational profit, and Loan to Deposits Ratio significantly affected profitability of bank of Return on Equity. Consumption of Cement significant affected profitability of bank of Return on Equity.
4. Asset as moderating variable with CAR, BOPO, Consumption of cement and Fed Rate have significant to affect profitability of bank of return on assets. Asset with Consumption of cements had and negative significant to affect profitability of bank of Return on Equity.

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