COMPARISON BETWEEN BANK PERFORMANCE OF COMMERCIAL BANK, STATE OWNED BANK, AND FOREIGN OWNED BANK IN INDONESIA DURING THE PERIOD 2005-2009

Dr. Siti Rahmi Utami*

Abstract: *The purpose of this study is to analyze the performance of commercial banks, state owned banks, and foreign owned banks. Forexamining the effect of variablescapital adequacy ratio, operating expenses to operating income, net interest margin, loan to deposit ratio onreturn on assetwithin the study period 2005-2009, data is analyzed by using regression analysis.*

Based on the results of the descriptive analysis, it can be concluded that for the study period 2006-2009, the highest Return on Assetwasachieved by foreign owned bankswhile in 2005the highest ratio wasreached by state-owned banks. During the study period 2005-2009,the highest Net Interest Margin wasachieved by state-owned banks, followed by commercial banks and foreign owned banks.Within the period 2005-2009, the highest operating expenses to operating incomeratio wasreached by state-owned banks, followed by commercial banks then foreign owned banks.

The highest loan to deposit wasreached by foreign owned banks in 2006-2009, while in 2005 made by commercial banks.The highest capital adequacy ratio during the period 2005-2009 wasachieved by foreign owned banks, followed by commercial banks and state-owned banks. Meanwhile, based on the results of the regression analysis, the study can be concluded that the capital adequacy ratio and loan to deposithave positive significant effect on profitability return on asset, while the operating expenses to operating incomeand net interest margin have negative significant effect on return on asset.

Key Words : *Bank Performance, capital adequacy ratio, return on asset, net interest margin, loan to deposit, operating expenses to operating income.*

*Green Economy Study Program, Faculty of Green Economy and Digital Communication, Surya University, Indonesia

1. INTRODUCTION

The main function of Indonesian banks is as collector and distributor of public funds and aims to support the implementation of national development in order to improve the equitable of development and its results, economic growth and national stability, towards improving the standard of living of the people (Bank Indonesia, 2012). As an intermediary between parties who have the funds to those who need the funds, banks required sound financial performance, so that the intermediary function can run smoothly.

Some financial ratios of banks as indicators in assessing the performance of the bank include the capitaladequacyratio (CAR), operatingexpenses to operatingincome (BOPO), net interest margin (NIM), Loan to depositratio (LDR), and return on assets (ROA). CAR is used to assess the health of banks in terms of capital or to measure the adequacy of capital owned by banks to support risky assets. BOPO ratio is used to measure the efficiency and ability of banks to carry out operation activities. LDR is the ratio between the total number of loans granted to third party funds. The amount of loans outstanding will determine the profitability of banks. NIM is the ratio between net interest income to the amount of loans (outstanding credit), while ROA indicates the company's ability to obtain earnings from the company's operations. ROA is used as a measure of performance because it is used to measure the effectiveness of the company to obtain profit from the use of assets owned by the company. If ROA increase means that the company's profitability increased, so that the eventual impact is an increase in profitability accepted by the shareholders.

According to research of Athanasoglou (2005), a bank with a good performance and a strong internal financing reflects the strong capital, and the capital has positive effect on ROA.From the results of empirical research and diversity of results from some previous researchon the effect of financial ratios on profitability (ROA), is an interesting phenomenon to study. This motivates us to do further research with using a sample of three types of banks, which consist of commercial banks, state owned banks, and foreign owned banks.

The three types of these banks play an important role in collecting and distributing public funds. State-owned banks are also often called Bank BUMN, is a commercial bank with stock majority owned by the government. National private commercial bank is a bank with legal entity, partly or wholly owned by Indonesian citizens or legal entity. Whereas foreign owned bank isa foreign bank which opened a branch in Indonesia. Our independent variablesare

the CAR, LDR, NIM and BOPO, anddependent variable is ROA, within the study period 2005-2009.

The rest of the paper is as follows. Section 2 reviews the previous research and formulate hypotheses on the subject matter of the study. Section 3 explains research methodology to test a number of hypotheses relating to our research focus. Section 4 analyses and discusses the results of hypotheses testing. Section 5 is the concluding section.

2.   LITERATURE REVIEW

2.1.Banking Institution in Indonesia

Banks are special and therefore must run business based on prudential principles. The functions of banks in Indonesia are basically as financial intermediary that take deposits from surplus units and channel financing to deficit units. According to Indonesian banking law, Indonesian banking institutions are typically classified into commercial and rural banks. Commercial banks differ with rural banks in the sense that the latter do not involve directly in payment system and have restricted operational area. (www.bi.go.id).

2.2.Bank's Performance and Its Determinant

Capital Adequacy Ratio (CAR)

Starting in March 2010, CAR has been adjusted to the provisions of RegulationNo. 10/15/PBI/2008 September 24, 2008 regarding the Capital Adequacy of Commercial Banks.Capital for the bank isheadoffice in Indonesia consists of:

a. Core capital

b. Supplementary capital

c. Additional supplementary capital

After taking into account certain factors that a reduction of capital referred to in Article 13 and Article 20 of Regulation No. 10/15/PBI/2008.

Capital for foreign bank branch office is netheadofficefund consisting of:

a. Operating funds (netinterofficefund);

b. Retained earnings and profit last yearafter removed the influence of the factors

c. Profit for the year amounted to 50% after removed the influence of the factors

d. General reserves;

e. Designated reserves;

f. Revaluation of fixed assets

g. General reserve asset allowance (PPA) of productive assets

For banks in Indonesia, according 14/18/PBI/2012 November 28th 2012 subject: Minimum Capital Adequacy shall be at the low as follows:

a. 8% of the Risk Weighted Assets (RWA) for the Bank's risk profile rating of 1.

b. 9% to less than 10% of the RWA for the risk profile of the Bank with a rating of 2.

c. 10% to less than 11% of RWA for the risk profile of the Bank with a rating of 3.

d. 11% to 14% of RWA for the risk profile of the Bank with a rating of 4 or 5.

Operations Cost to OperationsIncome(BOPO)

Operations expensestooperationsincomeis calculated asoperations expenses divided byoperationsincome for the same period (pursuant to Circular Letter No. 6/23/DPNP dated May 31, 2004, for banks in Indonesia).

The higher operatiois expenses to operations income, the lower the efficiency of the bank and the smaller the change in operating profit. Operating costs are costs incurred by the bank in order to carry out the main business activity (such as interest expense, labor costs, marketing costs and other operating costs). Operating income is the main income of the bank, while the interest income earned from the placement of funds in the form of credit and other operating income.

BOPO ratio shows the bank's efficiency in running its main business, primarily credit, based on the amount of funds collected. The smaller the bank's BOPOthe more efficient in carrying out its business activities.BOPO ratio of healthy bank is less than 1, otherwise banks are less healthyif banks have BOPO ratio greater than 1. In other words BOPO is negatively related to the performance of banks and predicted negatively affected the CAR.

Loan to Deposit Ratio (LDR)

Loan to depositratiois measured ascreditdivided bythirdpartyfunds. Credit is total credit to third party (not including third party bank). Third partyfunds consist of demand deposit, savings deposit and time deposits(pursuant to Circular Letter No. 6/23/DPNP dated May 31, 2004, for banks in Indonesia).

Loan to depositratio (LDR) reflecting the bank's ability to distribute funds of the third party for credit or similar credit, and if not so, there will be idle money that will lead to rise the opportunity cost and profit changes to be low. LDR is a ratio that measures a bank's ability to meet the financial obligations that must be fullfilled. The amount of LDR follows the

progress of Indonesia's economic condition, and since the end of 2001 the bank is considered healthy if the magnitude of the LDR is between 80% to 110% (Masyhud Ali, 2004).

Net Interest Margin (NIM)

Net interestmarginratiois calculated asnetinterestincomedivided byaverageearning assets (pursuant to Circular Letter No.6/23/DPNP dated May 31, 2004, for banks in Indonesia).

Net interest income derived from interest received from loans minus interest expense of funding sources that are collected. NIM of bank is categorized healthy if bank has NIM above 2%.

Sources of bank funds consist of three types: (1) funds from the first party (equity), (2) the funds of the second party (loans from other banks), and (3) third party funds (funds from the public). Funds from the public are grouped into three types: (a) current accounts, (b) savings or daily deposits, and (c) deposits.

To get the NIM increased, it is necessary to reduce the cost of funds. The cost of funds is the cost of interest paid by the bank to the respective sources of funds of the bank concerned. Overall, the cost to be paid by the bank will determine how many bank should set interest rate of loans to customers to earn net income of the bank. Thus, how far the bank in reducing the cost of funds will improve the NIM obtained for banks. Therefore, it is important for banks to monitor accurately the cost of funds (Masyhud Ali, 2004).

Return on Assets (ROA)

Managers often measure the performance of a firm by the ratio of net income to total assets. However, because net income measures profits net of interest expense, this practice makes the apparent profitability of the firm a function of its capital structure.

The assets in a company's books are valued on the basis of their original cost (less any depreciation). A high return on assets does not always mean that you could buy the same assets today and get a high return. Nor does a low return imply that the assets could be employed better elsewhere. But it does suggest that you should ask some searching questions.

In a competitive industry firms can expect to earn only their cost of capital. Therefore, a high return on assets is sometimes cited as an indication that the firm is taking advantage of

a monopoly position to charge excessive prices (Richard A. Brealey, Stewart C. Myers, and Alan J. Marcus, 2001).

2.3. Previous Research

Several results of previous research are the following. Dhanuskodi Rengasamy (2014) evaluated the impact of LDR on ROA for locally owned commercial banks in Malaysia for the period of five years from 2009 to2013. In general the study indicates that there was a positive impact on LDR to the profitability (ROA) of the banks. There is a condition for increase the profitability especially return on assets on the basis of the increase of loan deposit ratio. The research study strongly believes that if the banks concentrate the loan deposit ratio will result the profitability of the bank.

Abreu and Mendes (2002)found that there is a positive relationship between the ratio of the LDR and bank profits,the more loans offered by the banks the more it goes to generate high revenue and profit.

Mircea Epure and Esteban Lafuente (2014)conductedthe overall efficiency assessment considers the period 1998-2012, which includes two types of changes in the banking competitive environment. The first half of the period is characterized by gradual changes in the regulatory framework that aimed at enhancing monitoring activities. Results show general average bank-specific inefficiency decreases over this period. ROA results mostly corroborate the inefficiency scores. Also, the NIM slightly decreases, which could signal enhanced market competition and consolidation of banks (Bikker and Bos 2008).

Mircea Epure and Esteban Lafuente (2014) concluded thatin the case of the CAR, findings illustrate the positive association between capital requirements and accounting results. While no effect of the CAR over inefficiency is reported, this ratio is positively related to ROA and NIM. Significant CAR results may signal that external monitoring helps banks obtain better accounting profitability results. The financial soundness of this variable reduces uncertainty, and allows banks to have better operational flexibility and market positions, which could reduce fund rising costs (Das and Ghosh 2006; Banker et al. 2010; Hsiao et al. 2010).

2.4. Hypotheses

From the results of the previous studies on the bank's profitability, the hypotheses formulation arethefollowing :

H1: Capital adequacy ratio has positive significant effect on ROA.

H2: Loan to deposit ratio has positive significant effect on ROA.

H3: Operational costs to operating income has negative significant effect on ROA.

H4: Net interest margin has positive significant effect on ROA.

3. RESEARCH METHODOLOGY

3.1. Data Collection

In thisstudy, all of data are secondary data in the form of time series data for all variables, (CAR (capitaladequacyratio), BOPO (ratio of operational costs to operating income), NIM (netinterestmargin) and LDR (loan to deposit ratio) as independent variables, and ROA (return on assets) as the dependent variable, for three types of banking companies which consist of commercial banks, state-owned banks and foreign owned banks. Secondary data were obtained from Bank Indonesia website www.bi.go.id. The study period is from 2005 to 2009.

3.2. Data Analysis

Toanalyze the effect of variable CAR, BOPO, NIM and LDR on ROA, the steps are thefollowing:

a. Descriptive Analysis

Descriptive analysis aims to explain the growth of each variable of the commercial banks, state owned banks, and foreign owned banks during the study period 2005 - 2009.

b.   Regression Analysis

This study uses regression analysis model to analyze the effect of CAR, BOPO, NIM and LDR, on ROA, with the regression model isthe following :

Y= a + b1*X1+ b2*X2 + b3*X3 + b4*X4 + e

where :

Y = ROA

a = Constanta

X1 = CAR

X2 = BOPO

X3 = NIM

X4 = LDR

b1-b4 = Coefficient of regression

e =Standard error

3.3. Variables Measurement

Independent Variables

(1) Capital adequacy ratiois measured as capital divided byrisk weighted asset. The higher the CAR, the greater the financial resources that are able to be used to support implementation of the particular credit intermediation function. (2) Operations expensestooperations Income ratio is calculated asoperations expenses divided byoperationsincome for the same period.The smaller the bank's BOPOthe more efficient in carrying out its business activities. (3) Loan to depositratiois measured by dividedcreditwiththirdpartyfunds. The higher the LDR showed the greater use of bank deposits for lending, which means bank has been capable to run intermediary function properly. However, if the LDR is too high can also rise a liquidity risk for banks. (4) Net interestmarginratio is calculatedasnetinterestincomedivided by Average Earning assets.

Dependent Variable

Return on asset is calculated by dividingnetincomewithtotalasset.The higher the ROA, the more the profitable the bank.

4. RESULT AND ANALYSIS

4.1. Descriptive Analysis

The following is the analysis of the growth of each research variable of commercial banks, state owned banks, and foreign owned banks during the study period 2005-2009 for the five variables CAR, LDR, BOPO, NIM and ROA.

Tabel 4.1. Bank Performance During the Study Period 2005-2009 in Indonesia

Commercial Banks	Year				
	2005	2006	2007	2008	2009
CAR (%)	19.30	21.27	19.3	16.76	17.42
BOPO (%)	89.50	86.98	84.05	88.59	86.63
LDR (%)	59.66	61.56	66.32	74.58	72.88
NIM (%)	5.63	5.80	5.70	5.66	5.56
State Owned Banks	Year				
	2005	2006	2007	2008	2009
CAR (%)	19	21	18	14	14
BOPO (%)	95	97.05	90.68	89.92	92.35
LDR (%)	51	59.93	62.37	70.27	69.55
NIM (%)	5.78	5.77	6.03	6.07	5.81
Foreign Owned Banks	Year				

	2005	**2006**	**2007**	**2008**	**2009**
CAR (%)	21.94	24.48	24.01	29.06	32.11
BOPO (%)	82.8	81.18	79.98	83.38	78.78
LDR (%)	54.89	79.56	74.09	88.31	85.05
NIM (%)	4.78	4.91	4.70	4.29	3.78

1. Capital Adequacy Ratio

Minimum Capital Adequacy shall be at the low 8% of the Risk Weighted Assets (RWA) for the Bank's risk profile rating of 1

Commercial Banks

The amount of CAR ofcommercialbank in 2005 was 19.3%, then increased to 21,27% in 2006, in 2007 and 2008 decreased to 19.3% and 16.76%, and finally in 2009 CAR of Commercial Bank was 17,42%. Therefore, CAR reached a peak of21.27% in 2006. Within the period 2005-2009, theCommercial Bank was classified as a healthy bank asits CAR has reachedhigherthan Minimum Capital Adequacy shall be at the low 8% of the Risk Weighted Assets.

State Owned Banks

CAR of state owned bank in 2005 was 19%, then increased to 21% in 2006, but in 2007 - 2008 decreased to 18%, 14% and 14%. CAR reached a peak of21% in 2006. Therefore, from 2005-2009, the CAR of state owned Bank was classified as a healthy bank as its CAR has reachedhigherthan Minimum Capital Adequacy shall be at the low 8% of the Risk Weighted Assets.

Foreign Owned Banks

CAR of Foreign owned banks in 2005 was 21.94%, then increased to 24.48% in 2006, however in 2007 decreased to 24.01% and finally in 2008-2009 increased to 29.06% and*32.11%*. CAR reached a peak of32.11% in 2009. Therefore, from 2005 to 2009, the CAR of foreign owned bank was classified as a healthy bank as its CAR has reachedhigherthan Minimum Capital Adequacy shall be at the low 8% of the Risk Weighted Assets.

2. Operating Cost to OperatingIncome

BOPO ratio shows the bank's efficiency in running its main business, primarily credit, based on the amount of funds collected.

Commercial Banks

Operasinal costs to operating income (BOPO) of commercial banks in 2005 was 89.5%, in 2006 and 2007 decreased to 86.98% and 84.05%, then in 2007 and 2008 increased 88.59% and 86.63%. BOPO reached a lowest ratio of84.05% in 2007. These ratios indicate that commercial banks were healthy banksas ratio has reachedthe value of less than 1.

State Owned Banks

Operasinal costs to operating income of state owned banks in 2005 was 95.00%, in 2006 increased to 97.05%, in 2007 decreased to 90.68%, and in 2008-2009 reached 89.92% and 92.35%. BOPO reached a lowest ratio of89.92% in 2008. This ratios indicate that the state-owned Bank was healthy as the values of BOPO were less than 1.

Foreign Owned Banks

Operasinal costs to operating income of foreign owned banks in 2005 was 82.80%, in 2006-2007 decreased to 81.18% and 79.98%, in 2008 increasedto 83.38% and in 2009 decreased to 78.78%. BOPO reached a lowest ratio of78.78% in 2009. This ratios indicated that commercial banks were healthy as theBOPO ratios were less than 1.

3.   Loan to Deposit Ratio

The amount of LDR follows the progress of Indonesia's economic condition, and since the end of 2001 the bank was considered healthy if the ratio of the LDR was between 80% - 110%.

Commercial Banks

LDR of commercial banks in 2005 was 59.66%, in 2006-2008 increased to 61.56%, 66.32% and 74.58%. But, in 2009 LDR decreased to 72.88%. LDR reached a peak of74.58% in 2008. These ratiosimplied that LDR ratios of commercial banks were below 80%.

State Owned Banks

LDR of state owned banks in 2005 was 51%, in 2006-2008 increased to 59.93%, 62.37% and 70.27%. However in 2009 LDR decreased insignificantly to 69.55%. LDR reached a peak of70.27% in 2008. These ratios imply that LDR of state owned banks were still below 80%.

Foreign Owned Banks

LDR of foreign banks in 2005 was 54.89%, in 2006 increased significantly to 79.56%, in 2007 decreased to 74.09%, however in 2008 increased significantly to 88.31%, and in 2009 decreased to 85.05 %. LDR reached a peak of88.31% in 2008. These ratiosimplied that LDR of foreign owned banks in 2005-2007 were below 80%, while in 2008-2009 were above 80%.

4.   Net Interest Margin

NIM of bank is categorized healthy if the ratio is above 2%. To get NIM increased, it is necessary to reduce the cost of funds.

Commercial Banks

NIM of commercial banks in 2005 was 5.63%, in 2006 increased to 5.80%, in 2007-2009 decreased but not significantly to 5.70%, 5.66%, and 5,56%. NIM reached a peak of5.80% in 2006. NIM ratios of commercial banks were healthy because thevalues of NIM were above 2%.

State Owned Banks

NIM of state owned banks in 2005 and 2006 were 5.78% and 5.77, in 2007 and 2008 increased to 6,03 and 6,07, however in 2009 insignificantly decreasedto 5.81%. NIM reached a peak of6.07% in 2008. NIM ratios of state owned bankwere healthy because those NIM ratioswere above 2%.

Foreign Owned Banks

NIM of Foreign owned banks in 2005 was 4.78%, in 2006 increased to 4.91%, however in 2007-2009 significantly decreased to 4.70%, 4.29% and 3.78%. NIM reached a peak of4.91 % in 2006. NIM ratios of foreign owned banks were healthy because the ratiosof NIM were above 2%.

The graph shows the performance of the banking system on the the ratios of CAR, LDR, BOPO and NIM, which includes commercial banks, state owned banks, and foreign owned banks within the study period 2005-2009.

**Graphic 4.1. Capital Adequacy Ratio (%)During the StudyPeriod 2005-2009**
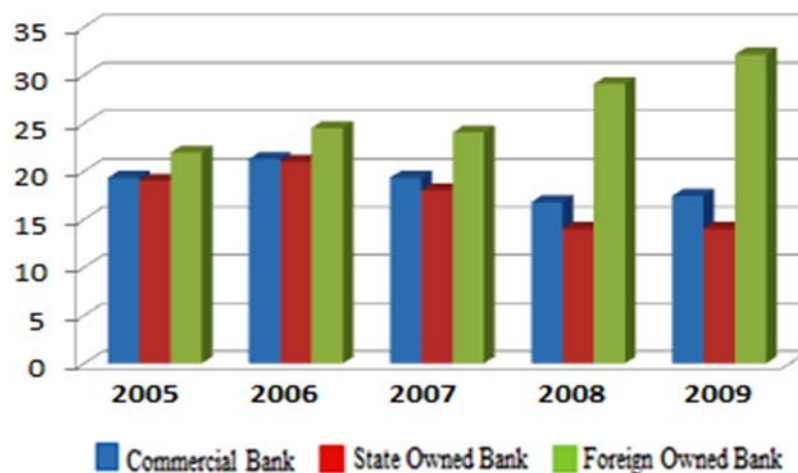
The graph shows the performance of the banking system on CAR in the study period2005-2009. Foreign bank had the highest CAR during the year 2005-2009. CAR of Foreign owned banks had increased during 2005-2006 and 2008-2009, while in 2007 CAR had decreased but was not significantly. The highest CAR of commercial banks was in 2006 while the lowest ratio was in 2008. The highest CAR of state-owned bank was in 2006 while the lowest ratio was in 2008 and 2009.

Graphic 4.2. Loan to Deposit Ratio (%)During theStudy Period 2005-2009
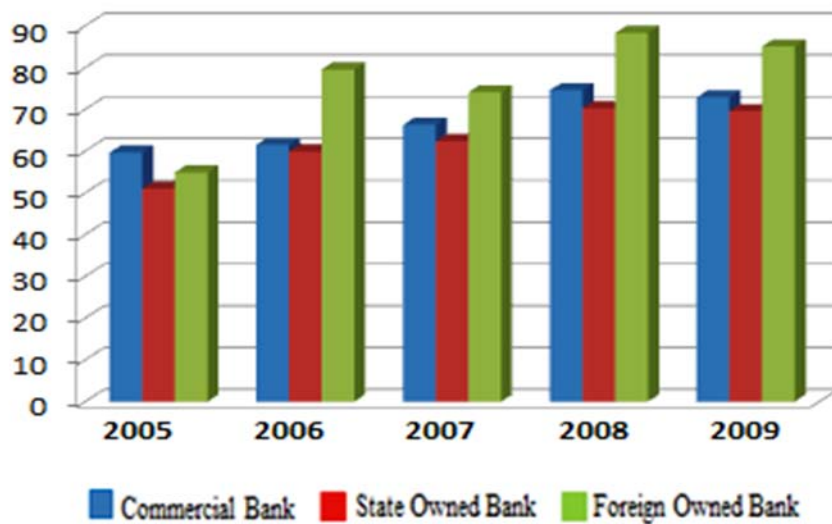
The graph shows the performance of banking on LDR in the study period 2005-2009. The highest LDR reachead by foreign owned bank during the period 2006-2009, while in 2005 the highest ratio was reached by commercial bank.

Graphic 4.3.Ratio of OperatingCost to OperatingIncome(%)During theStudy Period 2005-2009
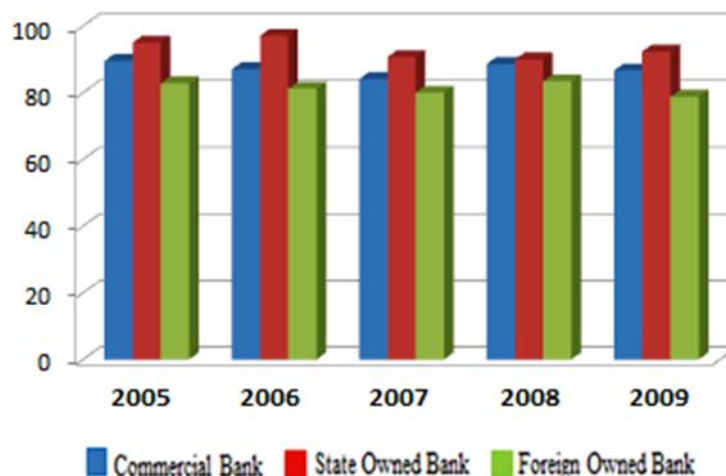
The graph showsthe performance of banking on BOPO ratio in the study period 2005-2009. The highest BOPOwasspent by state-owned banks, followed by commercial banks and foreign owned banks. The highest BOPO ratio of state-owned banks was in 2006, while the lowest ratio was in 2008. The highest BOPO ratio of commercial banks was in 2005, while the lowest ratio was in 2007. However, the highest BOPO ratio of foreign owned banks was in 2008, while the lowest ratio was in 2009.

Graphic 4.4. Net Interest Margin (%)During the StudyPeriod 2005-2009
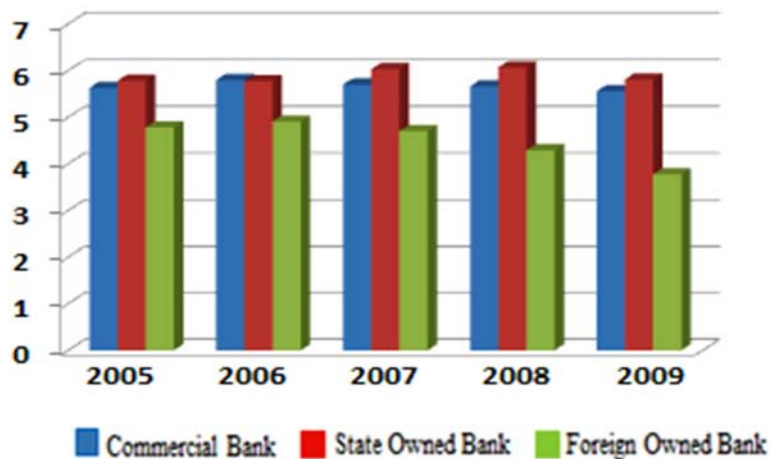
Graph shows the performance of banking within the study period 2005-2009.The highest NIM wasreached by state-owned banks in 2005 and 2007-2009, followed by commercial banks. NIM of foreign owned banks and commercial banks decreased during 2006-2009, while NIM of state-owned banks increased during 2006-2008. Foreign banks had the lowest NIM during the period 2005-2009.

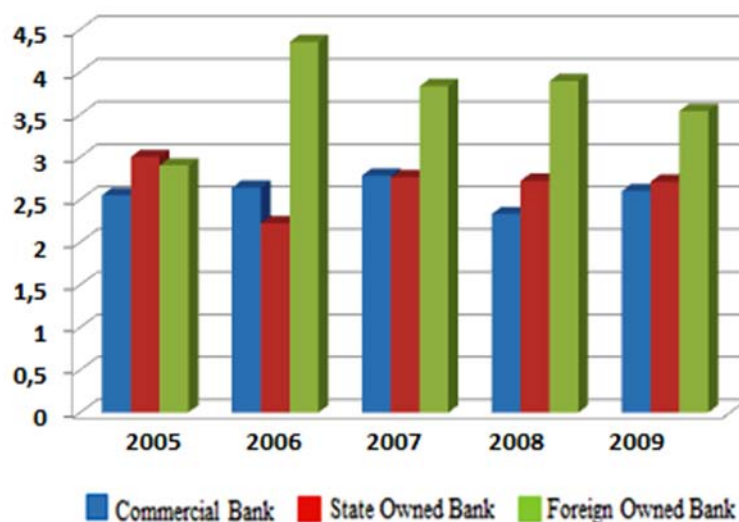**Graphic 4.5.Return on Asset (%)During the StudyPeriod 2005-2009**

Table 4.2. Return on Asset During the Study Period 2005-2009

ROA (%)	2005	2006	2007	2008	2009
Commercial Bank	2.55	2.64	2.78	2.33	2.6
State Owned Bank	3	2.22	2.76	2.72	2.71
Foreign Owned Bank	2.9	4.35	3.83	3.89	3.54

Graph shows the performance of banks within the study period 2006-2009. The highest ROA ratio wasreached by foreign owned banks,while in 2005 the highest ROA wasachieved by state-owned banks. Foreign owned banks had the highest ROA in 2006 while the lowest ratio was in 2005. Commercial banks had the highest ROA in 2007, while the lowest ratio was in 2008. The state-owned bank had the highest ROA in 2005, while the lowest ratio was in 2006.

4.2.Regression Analysis

The following analysis is the result of hypotheses testing by using regression analysis.

Table 4.3. Coefficients

Model	UnstandardizedCoefficients		
	B	t	Sig.
(Constant)	1.229	2.321	.037
CAR	.085	3.414	.005
(Constant)	10.003	5.089	.000
BOPO	-.081	-3.575	.003
(Constant)	.604	.676	.511
LDR	.035	2.697	.018
(Constant)	6.501	6.986	.000
NIM	-.656	-3.804	.002
a. Dependent Variable: ROA			

Capital adequacyratio has positive significant effect on profitability with 3,414 t-value and significance value of 0.005. BOPO hasnegative significant effect on return on assets, with the t-value -3.575 and significance value of0.003. Loan to depositratiohas positive significant effect on ROA, with t-value of 2.697 and a significance value of 0.018. Net interest margin has negative significant effect on ROA, with the t-value of -3.804 and significance value of 0.002. This result implies that the higher the CAR and LDR, the higher ROA. Whereas the higher BOPO and NIM the lower ROA.

Table 4.4.F Test

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.298	4	.824	3.884	.037[a]
	Residual	2.123	10	.212		
	Total	5.421	14			
a. Predictors: (Constant), NIM, LDR, BOPO, CAR						
b. Dependent Variable: ROA						

F test is conducted to see whether there is significant influence ofindependent variables (CAR, LDR, BOPO and NIM) simultaneously ondependent variable. From the result of the test showed thatall of variables X have significant effect on variable Y (ROA), with F value of 3,884 and significance level of 0.037.

Table 4.5.Model Summary

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.780[a]	.608	.452	.46075	2.741
a. Predictors: (Constant), NIM, LDR, BOPO, CAR					
b. Dependent Variable: ROA					

The coefficient of determination (R square) of 0.608, indicates that 60.8 percent of the change of dependent variable is explained byindependentvariables (CAR, LDR, BOPO and NIM), while the remaining 39.2 percentisexplained by the other variables which are not studied in this research.Meanwhile, adjusted R square obtained is 0.452 and the Durbin-Watson value was 2,741.

Table 4.6.Correlations Matrix

Correlations						
		CAR	BOPO	LDR	NIM	ROA
CAR	Pearson Correlation	1	-.663[**]	.521[*]	-.908[**]	.688[**]
	Sig.		.007	.046	.000	.005
BOPO	Pearson Correlation	-.663[**]	1	-.611[*]	.783[**]	-.704[**]
	Sig.	.007		.015	.001	.003
LDR	Pearson	.521[*]	-.611[*]	1	-.627[*]	.599[*]

	Correlation					
	Sig.	.046	.015		.012	.018
NIM	Pearson Correlation	-.908[**]	.783[**]	-.627[*]	1	-.726[**]
	Sig.	.000	.001	.012		.002
ROA	Pearson Correlation	.688[**]	-.704[**]	.599[*]	-.726[**]	1
	Sig.	.005	.003	.018	.002	
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

From correlations matrix (in table 4.6), we can indicate thatcapitaladequacyratio and loan to deposit ratio are positive significantly correlated with return on assets.BOPO and net interest margin are negative significantly correlated with return on assets. This result implies that the higher the CAR and LDR owned by the banks,the higher the ROA achieved, whereas the higher theBOPO and NIM spent, the lower the ROA reachedbythebanks.

4.3. Regression Assumptions

Tests carried out before analyzing the regression coefficients of variables. This assumption represents the ideal condition of reality (Van Horne, 1998). Tests are as follow. Multicollinearity of several sets of explanatory variables to test whether there is a linear relationship between the population means of the response variable and the explanatory variables. The objective of the test is to analyze the correlation between independent variables. We use correlation matrix are indicatorsto test multicollinearity (table 4.6).
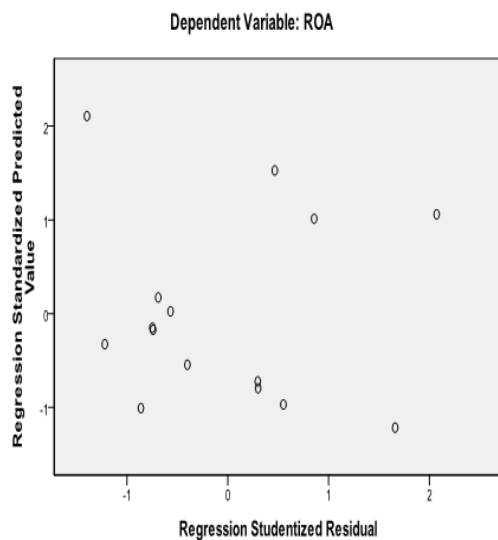
Autocorrelation is an assumption which means that information on some errors do not provide information to other errors. Test of autocorrelation will test whether a linear regression model has a correlation between the errors in period t with an error in period t-1 (before). Durbin Watson (DW) test statistic testing the correlation between errors. Our test statistic values are between 0 and 4 (table 4.5).

Heteroscedasticity declare variable Y's equal variation in relation to the value of variable X's. Test of heteroscedasticity aims to interpret whether the regression model has a different residual variance from an observation to another observation. Graphic implies that the data are not showing heteroscedasticity which indicated by the uncertain pattern of data.Meanwhile, if there are two standard deviations from the mean, or some other property of non-normal, then this indicates that there is non-normal distribution

assumption. In this research, the histogram shows the normally graphic pattern of distribution. Graphic normal P-P plots showed that the dots spread around the diagonal line, and its spread following the diagonal line. Thus, the regression models 1-4 that we use already meet the criteria for regression testing.

Graphic 4.6 Scatterplot   Graphic 4.7. Normal P-P Plot of Regression Standardized Residual
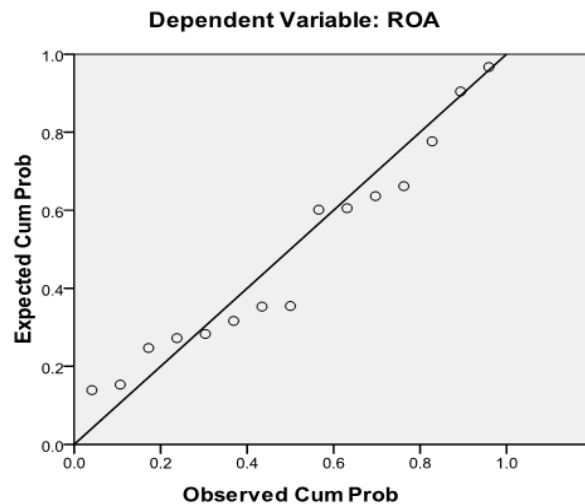
5.   CONCLUSION

Based on the results of the descriptive analysis, it can be concluded that for the study period 2006-2009, the highest ROA ratio wasachieved by foreign owned bankswhile in 2005 the highest ratioreached by state-owned banks. During the study period 2005-2009,the highest NIM wasachieved by state-owned banks, followed by commercial banks and foreign owned banks.Within the period 2005-2009, the highest BOPO ratio wasreached by state-owned banks, followed by commercial banks then foreign owned banks.

The highest LDR wasreached by foreign owned banks in 2006-2009, while in 2005 made by commercial banks.The highest CAR during the period 2005-2009 wasachieved by foreign owned banks, followed by commercial banks and state-owned banks. Meanwhile, based on the results of the regression analysis, the study can be concluded that the CAR and LDR have positive significant effect on profitability ROA, while the BOPO and NIM have negative significant effect on ROA.

REFERENCES

[1] Athanasoglou, Panayiotis P., Delis, Manthos D. and Staikouras, Christos., 2006., Determinants of Bank Profitability in the South Eastern European Region. Journal of Financial Decision making.

[2] Abreu, M. and V. Mendes., 2001., Commercial bank interest margins and profitability: evidence from some EU countries, Paper presented at the Pan-European Conference Jointly Organised by the IEFS-UK & University of Macedonia Economic & Social Sciences, Thessaloniki, Greece, May 17-20.

[3] Bikker, J.A., Bos, J.W.B., 2008. Bank Performance. Routledge, New York.

[4] Banker, R., Chang, H., Lee, S.Y., 2010. Differential impact of Korean banking system reforms on bank productivity. Journal of Banking and Finance 34(7), 1450-1460.

[5] Das, A., Ghosh, S., 2006. Financial deregulation and efficiency: An empirical analysis of Indian banks during the post reform period. Review of Financial Economics 15(3), 193-221.

[6] Dhanuskodi Rengasamy (2014). Impact of Loan Deposit Ratio (LDR) on Profitability: Panel Evidence from Commercial Banks in Malaysia. Proceedings of the Third International Conference on Global Business, Economics, Finance and Social Sciences (GB14Mumbai Conference) Mumbai, India. 19-21 December 2014.

[7] Hsiao, H.C., Chang, H., Cianci, A.M., Huang, L.H., 2010. First financial restructuring and operating efficiency: Evidence from Taiwanese commercial banks. Journal of Banking and Finance 34(7), 1461-1471.

[8] James C. Van Horne John M. Wachowicz JR. 2005. Fundamentals of Financial Management. twelfth edition. Prentice Hall.

[9] Mircea Epure and Esteban Lafuente (2014) Monitoring Bank Performance in the Presence of Risk. Barcelona GSE Working Paper Series, July 2014.

[10] Masyhud Ali.(2004). Asset Liability Management. PT. Elex Media Komputindo.

[11] Richard A. Brealey, Stewart C. Myers, Alan J. Marcus. 2001. Fundamentals of Corporate Finance Third Edition, with additional material from Fundamentals of Corporate Finance, Alternate Fifth Edition.

[12] www.bi.go.id