Factors Affecting Bank Performance: Cases of Top 10 Biggest Government and Private Banks in Indonesia in 2004 - 2013

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ABSTRACT

This study explores the internal factors that affect the performance of government and private banks in Indonesia. Samples include government and private banks whose assets were top 10 in the period of 2004-2013. The dependent variable is ROA while the independent variables are capital adequacy ratio (CAR), operational efficiency, net interest margin (NIM), non-performing loans (NPL) and loan to deposit ratio (LDR). The results show that there are significant factors that influence the performance of the government banks – they are operational efficiency, NIM, and NPL. As for the private banks – the factors are CAR and operational efficiency. The results support the efficiency theory, the signaling theory and relative market power hypothesis. This finding is expected to improve the performance of both the government banks and private banks in Indonesia.

Keywords: performance, return on assets, internal factors, government & private banks.

1. INTRODUCTION

The financial crisis occurred in the third quarter of 2008 which began with the US government budget deficit. The crisis has provided an indirect impact on the economy and the financial sector in Indonesia as evidenced by the increase in yield on government securities, the drop in stock prices, the weakening of the rupiah value, and the collapse of Bank Century. In 2010 the global economic recovery was happening with the economic growth became positive again. This was evidenced by bank deposits that also grew high, very adequate to support credit growth. In 2011, the performance of banks showed a positive development. The stability of the financial system remained under control as reflected in the various positive banking achievements that were achieved during 2011. Turbulence in global financial markets still continued in 2012 due to uncertainty about the handling of the European crisis. But the performance of banks still posted positive results (Indonesian Economic Report, 2012). Banking conditions in 2013 experienced a slight slowdown due to some tightening of monetary policy made by Bank Indonesia and the Government.

The above conditions of course affected the companies' performance, which can be seen through a wide variety of variables. This research focuses on internal factors because they are some less favorable conditions of external factors that faced by all companies so company must make better internal factors to produce better performance. Profitability is the most appropriate indicator to measure the performance of a bank. A profitability measure is the Return on Asset (ROA) in the banking industry. While the independent variables use CAR (Capital Adequacy Ratio), operational efficiency, NIM (Net Interest Margin), NPL

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(Non-Performing Loan) and LDR (Loan to Deposit Ratio) to assess the bank's performance. This study was also extended to distinguish the performance of government banks and private banks. Are private banks more oriented to the business resulting in better performance, or vice versa? The next thought is due to differences in the management of capital and ownership between private banks and government banks that will produce a different performance.

2. RESEARCH QUESTIONS

Do CAR, operational efficiency, NIM, NPL and LDR have effect on the level of performance in the government and private banks?

3. LITERATURE REVIEW

A company's performance produces results in accordance with the set targets. This performance is also used to evaluate the performance so that it can improve the company's performance that is unsatisfactory. Abera (2012) showed some studies on the performance of banks with application of some theories. 1) RMP (Relative Market Power) hypothesis posits that bank profitability is influenced by market share. It assumes that only large banks with differentiated products can influence prices and increase profits. 2) The efficiency hypothesis, on the other hand, posits that banks earn high profits because they are more efficient than others (Olweny and Shipo, 2011). This results to low operational costs leading to high profits (Zouari, 2010). 3) The signaling and bankruptcy cost hypotheses state that a higher capital signals positively to the market on the value of the bank. The positive signal provides private information to the bank to enhance capital as the good future prospects (Berger, 1995). The latter hypothesis suggests that in a case where bankruptcy cost is unexpectedly high, a bank holds more equity to avoid the period of distress. 4) The Risk Return Theory argues that capital and bank profitability are negatively associated (Saona, 2011). The Risk Return Theory argues that increasing risks by increasing leverage of the bank leads to higher expected returns. This suggests that if a bank intends to increase its profits by increasing leverage, the equity to asset ratio (capital) has to be reduced.

There are five hypotheses developed in this study, among others:

1) Effect of CAR on bank performance (ROA)

Capital Adequacy Ratio (CAR) shows the banks' ability to maintain sufficient capital. The main activity of the bank is to collect funds and channel them back in the form of loans. If a bank has enough capital or meet the requirements, it can operate to create profit. In addition, the bank can provide large loans and it has enough assets as collateral for third party funds deposited in the bank so that it will increase public trust.The higher the CAR, the better the performance of a bank. This is supported by Saeed (2014). Onuonga (2014), Myktybekovich (2013), Obamuyi (2013), Abera (2012). Raharjo, et al (2014) showed that CAR has a significant positive effect on private national banks and no significant effect on the state banks in Indonesia. But Frederick (2014), Gul, et al (2011), Dawood (2014) showed that CAR has no significant effect on performance. While Curak, et al (2011) proved that CAR has a significant negative effect on performance. So hypothesis 1 is **CAR has a significant positive impact on bank performance**

2) Effect of operational efficiency on bank performance (ROA)

Operational efficiency indicates whether a bank uses all factors of production optimally or efficiently. Thus, the efficiency of a bank's operations will greatly affect the performance of the bank. Abera (2012) stated that operating expenses show the overheads or costs of running the bank, including staff salaries and benefits, occupancy expenses and other

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expenses such as office supplies, as percentage of income. This ratio shows the bank's efficiency in running the business substantially, primarily loans, which until now the income of banks in Indonesia is still dominated by interest income from loans. The smaller operational efficiency ratio indicates more efficiency in carrying out its business activities. Almazari (2014), Dawood (2014), Onuonga(2014), Obamuyi (2013), Abera (2012), Sastrosuwito & Suzuki (2011), Curak, et al (2011), Pasiouras & Kosmidou (2007) found that better efficiency is associated with higher profitability. But Saunders dan Schumacher (2000); Brock and Suarez (2000); Maudos and Guvera (2003); Lieberg and Schwaiger (2006) proved that operational efficiency has a significant positive effect on profitability. So hypothesis 2 is **operational efficiency has a significant negative impact on bank performance**

3) Effect of NIM (Net Interest Margin) on bank performance (ROA)

NIM indicates the value of interest income derived from loans disbursed by banks. As a type of business, the bank is a company doing business in the field of provision of financing to other parties. Thus the advantage of the bank will be determined by interest income earned. The ability of bank management in controlling the amount of interest costs and in managing productive assets to create interests will affect the bank's profitability. Saunders and Schumacher (2000); Brock and Suarez (2000) proved that the net interest margin has a positive effect on profitability. While Raharjo, et al (2014) showed that the net interest margin has no significant effect on government banks but has a significant negative effect on private banks in Indonesia. So hypothesis 3 is **NIM has a significant positive impact on bank performance**

4) Effect of NPL (Non-Performing Loan) on bank performance (ROA)

This ratio portrays the bank's ability to keep the risk of loan repayment by the debtor. After credits are given, banks should monitor the use of the credits as well as the debtors' ability and compliance to meet their obligations cause if there is a failure of the debtor to pay, it will decrease bank's profitability. Frederick (2014) proved that the NPL has a significant negative effect on profitability. This is supported by Petria, et al (2015), Ongore and Kusa (2013); Abera (2012), Olweny & Shipho (2011), Sufian & Chong (2010), Kosmidou (2008), who found that asset quality has a significant negative impact on financial bank performance measured by ROA. But Duraj & Moci (2015) proved that the NPL has no significant effect on profitability. While Buchory (2015) proved that the NPL has a significant positive effect on performance. So hypothesis 4 is **NPL has a significant negative impact on bank performance**

5) Effect of LDR on bank performance (ROA)

LDR is a liquidity measure that measures the amount of funds placed in the form of credits from the funds collected by the bank (especially public funds). Higher LDR shows more risky bank liquidity conditions, conversely lower LDR shows lack of efficacy of banks to extend credits. The higher the LDR, the higher funds can be channeled to third party funds. With the distribution of third party funds, the bank earnings (ROA) will increase. Rengasamy (2014), Saeed (2014), Curak, et al (2011), Gul, et al (2011), Brock and Suarez (2006) proved that the loan to deposit ratio has a significant positive effect on profitability. But Petria, et al (2015) proved that the loan to deposit ratio has a significant negative effect on bank performance. So hypothesis 5 is **LDR has a significant positive impact on bank performance**.

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4. RESEARCH METHODOLOGY

The population of this study is state and private banks that went public in 2004 - 2013. The sampling technique is purposive sampling, based on criteria set by the researchers. The criteria are as follows: 1) Government and private banks submitted complete financial statements of 10 consecutive years from 2004 – 2013. 2) The government and the private banks were the top 10 biggest banks by assets in Indonesia in 2004-2013, representing approximately 80% of the total banking assets in Indonesia so as to describe the condition of banks in Indonesia. There are 4 goverment banks of biggest total assets and period in 10 years so total government banks are 40 then 6 private banks of biggest total assets and period in 10 years so total government banks are 60.
The empirical model is developed as follows:

$$ROA = \beta_0 + \beta_1 CAR + \beta_2 OE + \beta_3 NIM + \beta_4 NPL + \beta_5 LDR + \varepsilon$$

Variables used in the empirical model is summarized in Table 4.1 below :

Table 4.1 Summary of Research Variables

No	Variables	Operationalization
1	ROA (Return On Assets)	Net income before taxes divided by total assets
2	CAR (Capital Adequacy Ratio)	Capital divided by risk-weighted assets Capital consists of core capital + supplementary capital + additional supplementary capital
3	Operational efficiency	Operating expenses divided by operating income
4	NIM (Net Interest Margin)	Net interest income divided by average consumption loans
5	NPL (Non-Performing Loan)	Non-performing loans divided by total loans
6	LDR (Loan Deposit Ratio)	Loans divided by third party funds (savings, current accounts and deposits)

Further details of CAR, in line with the standards set by the Bank of International Settlements (BIS), all banks in Indonesia are required to provide a minimum capital of 8% of risk weighted assets. While operational efficiency ratio has a best figure if it is below 90%. If ratio exceeds 90%, that is close to 100%, then the bank can be categorized as inefficient in running its operations. A healthy bank also has NIM above 2%, net NPL ratio below 5%, and LDR magnitude between 78% to 92%.

5. FINDINGS

1) Descriptive Statistics

Samples taken from government banks were categorized as 10 biggest asset owners during the period 2004 to 2013. There were 4 government banks in 10 years making a total of 40 banks and there were 6 private banks in 10 years making a total of 60 banks. The following is the descriptive data for the two categories of banks.

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Table 5.1 Descriptive Analysis of Dependent and Independent Variables

Variables	Government banks		Private banks	
	Mean	Number	Mean	Number
ROA	2.8698	40	2.3487	60
CAR	16.9078	40	17.4540	60
Operational Efficiency	76.0080	40	79.1583	60
NIM	6.6265	40	6.3282	60
NPL	4.9530	40	2.9823	60
LDR	75.1342	40	77.3463	60

Source: Data processed

Results of descriptive analysis shown in Table 5.1 can be explained as follows:

1. The ROA mean of government banks amounted to 2.86%. It shows that the average effectiveness in the bank profit from the use of assets owned amounted to 2.86%. ROA of the private banks amounted to 2.34%. This shows that the management of state-owned banks has a pretty good performance, but the private banks are less good. It is seen from the figures that ROA mean of conventional commercial banks in Indonesia in 2004-2013 amounted to 2.82%.
2. All indicator proved that both government and private banks have good performance because all indicators met the standards set by Bank Indonesia.

2) Regression Analysis

Testing hypotheses by using regression tests have passed the test of normality, multicolearity, autocorrelation and heteroskedasticity. While the results of the regression tests for government and private banks can be seen in table 5.2 below:

Table 5.2 Regression Analysis of Government & Private Banks in Indonesia

Variables	Government banks			Private banks		
	B	t	Sig	B	t	Sig
Constant	5.944	7.739	.000	5.846	6.624	.000
CAR	.040	1.769	.086	.066	2.709	.009***
OE	-.069	-9.694	.000***	-.055	-4.883	.000***
NIM	.337	12.178	.000***	.093	1.632	.109
NPL	-.098	-5.521	.000***	-.053	-.762	.450
LDR	-.003	-.820	.418	-.010	-1.410	.164
R square	.946			.556		
Adj R square	.938			.514		

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D_W stat	2.111	2.141
F statistic	0.000***	0.000***

Note, (1)*** significant at 1%, **significant at 5%, *significant at 10%

From these results, it appears that operational efficiency of government and private banks significantly influence the profitability with a negative direction (p value = 0.000 <5%). The result supports research that conducted by Almazari (2014), Dawood (2014), Onuonga(2014), Obamuyi (2013), Abera (2012), Sastrosuwito & Suzuki (2011), Curak, et al (2011), Pasiouras & Kosmidou (2007).

As for government banks, other factors that significantly influence the profitability are NIM with a positive direction (p value = 0.000 <5%), the result supports research that conducted by Saunders and Schumacher (2000); Brock and Suarez (2000) and NPL with a negative direction (p value = 0.000 <5%). The result supports research that conducted by Petria, et al (2015), Frederick (2014), Ongore and Kusu (2013); Abera (2012), Olweny & Shipho (2011), Sufian & Chong (2010), Kosmidou (2008). As for private banks, other factor that significantly influences the profitability is CAR with a positive direction (p value = 0.009 <5%). The result supports research that conducted by Saeed (2014), Onuonga (2014), Myktybekovich (2013), Obamuyi (2013), Abera (2012).

6. CONCLUSIONS AND RECOMMENDATIONS

From the results above, the factors affecting the performance of the government banks are operational efficiency, NIM and NPL. While the factors that affect the performance of private banks are CAR and operational efficiency. The results showed that both the government and private banks can conduct operations so well that the efficiency can be improved. These results also support the efficiency theory. Another result is concerning the government bank credits so that they could excel in the management of net interest income sources. This needs to be maintained and continually improved. But the banks also need to pay attention to collect more account receivables as their NPL was close to 5%. For private banks, CAR is one of the main levers of profitability and this supports the signaling theory. Another result is that private banks did not focus on interest income from its lending but on fee-based services such as telephone and electricity payments, transfer and clearing costs, and others. This is in accordance with the Relative Market Power Hypothesis. So fee-based income provided by private banks need to be maintained. As for credit management, private banks should immediately make improvements so that the interest income from the loan portfolio can be increased. The limitation of this study is that it only explored internal factors that affected the performance of the banks. For further researches they should add the external factors as well such as inflation, market concentration, gross domestic product, and exchange rate.

REFERENCES

[1] Abera, A (2012), "Factors Affecting Profitability: An Empirical Study on Ethiopian Banking Industry", *Thesis Degree of Master of Science (Accounting and Finance)*, Addis Ababa University, Ethiopia

[2] Almazari, A.A (2014), "Impact of Internal Factors on Bank Profitability: Comparative Study between Saudi Arabia and Jordan", *Journal of Applied Finance & Banking*, vol. 4, no. 1, 2014, 125-140 ISSN: 1792-6580 (print version), 1792-6599 (online)

ISSN: 2304-1013 (Online); 2304-1269 (CDROM); 2414-6722 (Print)

[3] Berger, A.N (1995), "The Relationship Between Capital and Earnings in Banking", *Journal of Money, Credit and Banking*, vol. 27, no. 2, pp. 432-456
[4] Brock, P. & Suarez, L. (2000), "Understanding the Behavior of Bank Spreads in Latin America", *Journal of Development Economics*, 63, 113–134.
[5] Buchory, H. A (2015), "Banking Intermediation, Operational Efficiency and Credit Risk In the Banking Profitability", *International Journal of Business, Economics and Law*, Vol. 7, Issue 2, pp 57 – 63
[6] Curak, M; Poposki, K & Pepur, S (2011), "Profitability Determinants of the Macedonian Banking Sector in Changing Environment", *Procedia Social and Behavioral Sciences*, *Elsevier.*
[7] Dawood, U (2014), "Factors Impacting Profitability of Commercial Bank in Pakistan for the Period of (2009 – 2012)", *International Journal of Scientific and Research Publications*, Volume 4, Issue 3, pp 1 – 7
[8] Duraj, B & Moci, E (2015), "Factors Influencing The Bank Profitability – Empirical From Albania", *Asian Economic and Financial Review*, 5(3): pp 483-494
[9] Frederick, N.K (2014), "Factors Affecting Performance of Commercial Banks in UgandaA Case for Domestic Commercial Banks", *Proceedings of 25th International Business Research Conference*, Taj Hotel, Cape Town, South Africa, ISBN: 978-1-922069-42-9
[10] Kosmidou, K (2008), "Determinants of Banks' Profits in Greece During the Period of EU Financial Integration", *Managerial Finance*, vol. 34, no. 3, pp. 146–159
[11] Liebeg D., & Schwaiger, M.S. (2006), "Determinants of the Interest Rate Margins of Austrian Banks", *Financial Stability Report*, 12, pp 104-116.
[12] Maudos, J. & Fernandez de Guevara, J. (2004), "Factors Explaining the Interest in the Banking Sectors of the European Union", *Journal of Banking and Finance,* 28, pp 2259-2281.
[13] Myktybekovich, S.T (2013), " Factors Affecting the Profitability of Banking System in Kyrgyzstan", *Thesis in Banking and Finance*, Eastern Mediterranean University.
[14] Obamuyi, T. M (2013), " Determinants of Banks' Profitability in A Developing Economy : Evidence From Nigeria", *Organizations and Markets in Emerging Economies*, VoL. 4, No. 2(8), pp 97 – 111.
[15] Olweny, T & Shipo, MT (2011), "Effects of Banking Sectoral Factors on the Profitability of Commercial Banks in Kenya", *Economics and Finance Review*, Vol. 1, no. 5, pp. 1-30.
[16] Ongore, V.O & Kusa, G.B. (2013), "Determinants of Financial Performance of Commercial Banks in Kenya", *International Journal of Economics and Financial*, Issue, 3(1), 237-252.
[17] Onuonga, S. M (2014), "The Analysis of Profitability of Kenya`s Top Six Commercial Banks: Internal Factor Analysis", *American International Journal of Social Science*, Vol. 3, No. 5; pp 94 – 103
[18] Pasiouras F & Kosmidou, K (2007), "FactorsInfluencing the Profitability of Domestic & Foreign Commercial Banks in European Union", *Research in International Business and Finance*, vol. 21, no. 2, pp. 222-237.
[19] Petria, N ; Capraru, B & Ihnatov, I (2015), "Determinants of Banks'Profitability : Evidence from EU 27 Banking Systems", *Procedia Economics and Finance Elsevier*, 20, pp 518 – 524
[20] Raharjo, P.G; Halim, Manurung, A. H & Maulana, T.N.A (2014), "The Determinant of Commercial Banks' Interest Margin in Indonesia: An Analysis of Fixed Effect Panel

ISSN: 2304-1013 (Online); 2304-1269 (CDROM); 2414-6722 (Print)

Regression", *International Journal of Economics and Financial Issues*, Vol. 4, No. 2, 2014, pp.295-308

[21] Rengasamy, D (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,* Mumbai, India, pp 1 – 12

[22] Saeed, M.S (2014), "Bank-related, Industry-related and Macroeconomic Factors Affecting Bank Profitability : A Case of the United Kingdom", *Research Journal of Finance and Accounting*, Vol. 5, N0. 2, pp 42 – 50

[23] Saona, P.H (2011), "Determinants of the Profitability of the U.S Banking Industry", *International Journal of Business and Science*, 2 (22) , pp 255-269.

[24] Sastrosuwito, S & Suzuki Y (2011), "Post crisis Indonesian Banking System Profitability: Bank-specific, Industry-specific, and Macroeconomic Determinants", *Paper presented at the 2nd international research symposium in service management Yogyakarta*, Indonesia.

[25] Saunders, A., Schumacher, L. (2000), "The Determinants of Bank Interest Rate Margins: an International Study", *Journal of International Money and Finance*, 19, 813–832.

[26] Sufian, F & Chong, R R (2008), "Determinant of Bank Profitability in a Developing Economy: Empirical Evidence from the Philippines", *Asian Academy of Management Journal of Accounting & Finance*, vol. 4, no. 2, pp. 91-112.

[27] Zouari, A (2010), "Efficient Structure versus Market Power: Theories and Empirical Evidence", *International journal of Economics and Finance*, 2(4), pp 151-166.

ISSN: 2304-1013 (Online); 2304-1269 (CDROM); 2414-6722 (Print)