

THE IMPACT OF MACROECONOMICS FACTOR, CAPITAL STRUCTURE AND LIQUIDITY ON THE FOREIGN BANK'S PERFORMANCE IN INDONESIA

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ABSTRACT

Throughout the eleven months of 2015, the net profit of foreign bank groups in Indonesia declined by 30.16% compared to the same period in 2014. Based on monthly financial report data of February 2017, totally foreign banks posted net profit of IDR 1.51 trillion or an increase of 1.95% from the same period in 2016. However, net interest income fell 0.32% to IDR 2.96 trillion. In terms of capital structure, foreign banks generally have a strong capital structure that is well above the national average of 22.91% per position in December 2016. While the NPL level of some Foreign Banks in 2007-2008 increased sharply. The low corporate value is indicated by the low financial performance measured by one of the financial ratios of Return on Assets (ROA). This condition, allegedly due to the bank liquidity. Based on this background, this study aims to examine the effect of macroeconomic, capital structure and liquidity on bank performance.

This study uses quantitative method approach to achieve the objectives and answer the research questions and test the hypothesis that has been developed. This study also uses dynamic data panel analysis based on the model of panel data frame.

The type of data used is secondary data, i.e. data/information of foreign banks listed on Financial Service Authority (OJK) period 2007-2016, sourced from OJK. Meanwhile, the data collected is bank liquidity and performance. The unit of analysis is restricted to foreign Bank who listed on Financial Service Authority. The population in this study is foreign banks listed on 2007-2016 period, as many as 10 banks (cross-section), where the periodization of financial statements is determined for 10 years i.e. 2007-2016 (time series), among others to meet the requirements of data analysis and to represent the population taken. The performance of foreign banks is measured by CAR (Capital Adequacy Ratio), ROA (Return on Asset), ROE (Return on Equity) and NIM (Net Interest Margin).

The results show that simultaneously there is significant effect from macroeconomic factor, capital structure and liquidity on the performance of foreign bank in Indonesia. Partially; BIRATE, Interbank Overnight (O/N) rate, DTA, DTE, DPKTE and LP which have a significant effect on CAR; BIRATE, Exchange Rate, DTE, DPKTE and LP which have a significant effect on ROA; BIRATE, Exchange Rate, Interbank Overnight (O/N) rate, DTE, DPKTE and LP which have a significant effect on ROE; BIRATE, Exchange Rate, Interbank Overnight (O/N) rate, DTA and LP which have a significant effect on ROE.

Keywords: Macroeconomics Factor, Capital Structure, Liquidity, Performance of Foreign Banks, CAR, ROA, ROE, NIM.

INTRODUCTION

Research Background

Foreign banks group in Indonesia were under pressure throughout 2015 as their larger loan portion were distributed to corporations rather than to the retail segment. In fact, corporations are less expansive throughout the year due to the economic slowdown and the weakening of commodity prices. The bank's net profit slumped for the first time since 2012 which continued to record positive growth. Based on statistics from the Indonesian Financial Services Authority, throughout the eleven months of 2015, the net profit of foreign bank group in Indonesia slumped by 30.16% compared to the same period in 2014.

The business model of the branches of foreign bank group in principle consists of two major parts of the investment banking business and the conventional banking business. Investment banking business such as JP Morgan Chase Bank. While conventional banking business such as Citibank NA, Bank of Tokyo Mitsubishi UFJ Ltd., etc. Bank of Tokyo Mitsubishi UFJ Ltd. posted the highest profit growth of 262.39% to IDR 395 billion as of February 2017 and the largest loss was recorded by JP Morgan Chase Bank with a net loss of IDR 2.7 billion. Based on the intermediary function, Bank of Tokyo Mitsubishi UFJ Ltd became the largest credit provider, amounting to IDR 90.98 trillion, followed by HSBC for IDR 46.5 trillion and Citibank NA IDR 38.14 trillion. Based on monthly financial report data of February 2017, total foreign banks posted net profit of IDR 1.51 trillion, up 1.95% from the same period in 2016. However, net interest income fell 0.32% to IDR 2.96 trillion.

Viewed from capital structure, foreign banks generally have strong capital structure which is well above the national banking average of 22.91% per position in December 2016, only Standard Chartered Bank has a minimal CAR compared to other Foreign Banks. The low value of the company is allegedly due to the company's less financial performance in the last five years. This is indicated by the low financial performance measured by one of the financial ratios of Return on Assets (ROA). There are foreign banks whose performance tends to decline and even lose. But in general the financial performance of the company tends to be stable. Foreign banks tend to be conservative in conducted the improvement of strategies.

The condition above allegedly caused due to the aspect of liquidity. Commercial banks are one financial institution that has a vital role in the nation's economy, especially for countries which its economy is still very dependent on the presence of banks as a source of financing of its economic activities. In the macroeconomic order, the bank is a transmission belt that transmits monetary policy, while in micro-economic order, banks are a source of financing for both business and individual (Koch & Mac Donald, 2000). So that the role of banks in the fulfillment of liquidity for business and individuals is vital as well make banks very vulnerable to liquidity risk.

Refer to Diamond & Dybvig (1983); Rauch et al. (2008), one of the main reasons why banks are particularly vulnerable to liquidity risk is their role in transforming maturities and providing guarantees in order to meet the liquidity needs of their depositors. This resulted in bank liquidity being suddenly depleted and the difficulties of liquidity in a bank may spread to other banks, resulting a systemic risk as described above and there are only a few studies devoted to analyzing one of the major factors to make bank as a secure and trustworthy institution when there is an economic shock.

Based on this background, it is interesting to examine the effect of macroeconomics factor, capital structure and liquidity on the performance of foreign banks in Indonesia.

Research Objective

The objective of this study is to examine the effect of macroeconomics factor, capital structure and liquidity on the performance of foreign bank in Indonesia.

LITERATURE STUDIES

Liquidity

Liquidity can be defined as the ability of financial institutions to fulfill all their obligations related to the demand for funds (Yeager & Seitz, 1989; Gitman, 2009). This opinion is also in line with the definition of liquidity proposed by Sauer (2007); Williamson (2008); Bank for International Settlements (2008); Moore (2009), namely the ability of banks to fund the increase in assets and meet the obligations that have matured without experiencing an unacceptable loss. For that bank needs to keep the liquid assets to meet the obligations of its customers or tend to be precautionary (precautionary). If the bank does not have sources of funds in meeting its customers' demand, the bank must borrow to the interbank money market or central bank.

Refer to Farag, Harland & Nixon (2013), the source of bank liquidity consists of cash or assets that can be converted into cash within a short time at a reasonable cost. A slightly different opinion is expressed by Myers & Rajan (1998) where liquidity is described as the ease of converting assets into other assets through trade. So that liquidity can also be interpreted as a convenience in converting assets into money used in the trading process.

Based on those definition, the liquidity used in this study is in accordance with the definition from Bank for International Settlements (BIS), namely as the ability of banks to fund the increase in assets and meet its obligations without causing harm. Because the definition proposed by BIS has become the reference of the banking in the world and also very comprehensive and includes various definitions that have been put forward by previous researchers. In this research, liquidity is measured by the dimension of loan to deposit ratio.

Foreign Bank Performance

According to Owolabi, Obiakor & Okwu (2011); Vodova (2011), the bank's performance is associated with profitability as measured by the amount of revenue generated by a firm that exceeds the relevant costs associated with generating that income. Lartey, Antwi & Boadi (2013) define profitability as the ability of banks in generating revenue far greater than the cost required.

There are some proxies that used by the previous researcher, Anbar & Alper (2011) measuring profitability using Return on Assets (ROA) and Return on Equity (ROE) as a function of the determinant factors of specific variables of banks and macroeconomics. Saleem & Rehman (2011) use ROA, ROE and Return on Investment (ROI) as proxy of profitability, where liquidity gives significant impact to ROA but not significant to ROE and ROI. Alshatti (2015) also uses the same proxy of ROE and ROA as proxy of profitability, where its research finds that there is the influence of liquidity to bank profitability indicated by ROE and bank ROA.

Hahn & Powers (2010) examined the performance of banks by using Return on Assets (ROA) because ROA is a primary measure of the performance of banking industry (FDIC, 1995). ROA is one form of ROI, where the use of this measure is consistent with Porter's suggestion (1980, 1985) where ROI is an appropriate performance measure. Based on previous

research, ROA is defined as the net income divided by total assets (Lenz, 1980; Robinson & Pearce, 1988; Bernstein, 1993). On the other hand Al-Tamimi & Jabnoun (2010) measure the performance of banks with ROA and ROE.

Based on the description above, the performance of foreign banks in this study is measured by dimensions of:

1. CAR (Capital Adequacy Ratio)
2. ROA (Return on Asset)
3. ROE (Return on Equity)
4. NIM (Net Interest Margin)

Hypotheses

Based on the description above, the hypothesis is proposed as follow:

H: Macroeconomic Factor, Capital Structure and Liquidity effect on Performance (CAR, ROA, ROE, NIM) either simultaneously or partially.

METHODOLOGY

This study uses a quantitative method approach to achieve the purpose and to answer the question of the research as well as to examine the hypothesis. This study also uses a dynamic panel data analysis based on the frame of model data panel.

The type of data used is secondary data, i.e. data/information of foreign banks listed on Financial Service Authority period 2007-2016, sourced from OJK and BI. Meanwhile, the data collected is bank liquidity and performance.

The unit of analysis is restricted to foreign Bank who listed on OJK. The population in this study is foreign banks listed on Financial Service Authority period 2007-2016, as many as 10 banks (cross-section), where the periodization of financial statements is determined for 10 years i.e. 2007-2016 (time series). So the data obtained is a combination of cross section data and time series called as panel data. The panel data structure is expected to provide more information. The periodization of data is determined for 10 years (2007-2016), among others, to meet the requirements of data analysis and to represent the population taken.

The design of the analysis to be used in this study is the regression for panel data. Panel data regression is a regression analysis that combines time series data with a cross section, where the same cross section unit is measured at different times.

RESULT AND DISCUSSION

In this section will be described the results of hypothesis testing on the effect of Macroeconomic, Capital Structure and Liquidity to the Performance of Foreign Banks (Table 1). The performance of Foreign Banks is measured by CAR, ROA, ROE and NIM.

Table 1
RECAPITULATION OF THE EFFECT OF MACROECONOMIC, CAPITAL STRUCTURE, LIQUIDITY ON FOREIGN BANK PERFORMANCE

Variable	Indicator	Foreign Bank Performace			
		CAR	ROA	ROE	NIM
Macro Economic Factor	BI RATE	1491.904*	167.870*	787.974*	280.525*
	INFLATION	0.045	0.06	0.106	0.031
	EXCHANGE RATE	0	-0.001*	-0.003*	0.000*
	INTERBANK OVERNIGHT (O/N) RATE	-0.458*	-0.167	-17.350*	-0.432*
Capital Structure	DTA	-116.119*	-1.346	11.364	6.152*
	DTE	-0.018*	-0.001*	-0.008*	0
	DPKTE	0.025	0.003*	0.013*	0
Method		Random Effect	Random Effect	Random Effect	Random Effect
F Test		10.832	16.866	17.917	20.342
R ²		3.15625	3.921527778	4.024305556	4.236805556

Macroeconomic, Capital Structure & Liquidity to Car

Model of Common (Pool) Effect or Fixed Effect

The test is done by Chow-Test with hypothesis:

H_0 : Model uses common effect model.

H_1 : Model uses fixed effect model.

Table 2 RESULT OF CHOW TEST OF HYPOTESIS 1A			
Hypothesis	F count	Prob	Conclusion
Hypotesis 1a	6.761311	0.000	H ₀ rejected; Fixed Effect

The calculation results $\text{Prob} < \alpha$ (0.05), so that can be concluded that H_1 is accepted, so the model used in this study is fixed effect model (Table 2).

The next process is selecting best panel model that still need to continue with Hausman Test to find out whether the model of panel data follows fixed effect model or random effect model.

Model of Fixed Effect or Random Effect

The test is done by Hausman test with hypothesis:

H_0 : Model uses random effect model.

H_1 : Model uses fixed effect model.

Table 3			
RESULT OF HAUSMAN TEST OF HYPOTESIS 1A			
Hypothesis	Statistics Test χ^2	Prob	Conclusion
Hypothesis 1a	0.0000	1.0000	H ₀ accepted Random Effect

Based on the above Table 3 it is known that p value > α (0.05), so that H₀ is accepted, then it can be concluded that the data more precisely to use random effect model.

Model of Common Effect or Random Effect

The test done by Hausman test with hypothesis:

H₀: Model uses common effect model.

H₁: Model uses random effect model.

Table 4			
RESULT OF LAGRANGE MULTIPLIER (LM) TEST OF HYPOTHESIS 1A			
Hypothesis	Statistics Lagrange Multiplier (LM)	Prob	Conclusion
Hypothesis 1a	30.87070	0.0000	H ₀ rejected Random Effect

Based on the above Table 4 it is known that p value > α (0.05), so that H₀ is rejected, then it can be concluded that the data more precisely to use random effect model.

Table 5				
RESULT OF RANDOM EFFECT ESTIMATION OF HYPOTHESIS 1A				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	41.96339	39.32665	1.067047	0.2888
BIRATE	968.9789	354.9687	2.729759	0.0076
INFLATION	0.657810	0.970286	0.677956	0.4996
EXCHANGE RATE	-0.000332	0.001343	-0.247051	0.8054
INTERBANK OVERNIGHT (O/N) RATE	1.318105	0.507298	2.598285	0.0109
DTA	-87.57441	34.12119	-2.566569	0.0119
DTE	-0.020530	0.006439	-3.188469	0.0020
DPKTE	0.028914	0.012298	2.351205	0.0209
LP	70.96147	25.13792	2.822885	0.0059
LI	-35.74618	34.39478	-1.039291	0.3015
Effects Specification			S.D.	Rho
Cross-section random			8.726276	0.1550
Idiosyncratic random			20.37397	0.8450
Weighted Statistics				
R-squared	0.478403	Mean dependent var		29.34253
Adjusted R-squared	0.425658	S.D. dependent var		29.43847
S.E. of regression	22.31518	Sum squared resid		44319.10
F-statistic	9.069989	Durbin-Watson stat		0.891789

Table 5 RESULT OF RANDOM EFFECT ESTIMATION OF HYPOTHESIS 1A	
Prob(F-statistic)	0.000000

The test results in Table 5 of Econometric Model are:

$$CAR_{it}=41.96339+968.9789BIRATE_{it}+0.657810INFL_{it}-0.000332EXCH_{it}+1.318105ONINT_{it}-87.57441DTA_{it}-0.020530DTE_{it}+0.028914DPKTE_{it}+70.96147LP_{it}-35.74618LI_{it}+e10_{it}$$

The regression equation above is in line with the hypothesis proposed that the increasing of macroeconomics factors and capital structure as well as liquidity will improve CAR (Performance).

Simultaneous Hypothesis (1)

H_0 : $\beta_{31}=\beta_{32}=\beta_{33}...\beta_{37}=0$; there is no effect of macroeconomics factor and capital structure as well as liquidity on CAR.

H_1 : At least there is $\beta_{ij} \neq 0$; there is the effect of macroeconomics factor and capital structure as well as liquidity on CAR.

Table 6 SIMULTANEOUS TESTING OF HYPOTHESIS 1A			
Hypothesis	F-statistic	Prob(F-statistic)	Description
Hypothesis 1a	9.069989	0.000*	H ₀ rejected

*Significant at $\alpha=0.05$

The result of testing in Table 6 shows that there is the simultaneous effect of macroeconomics factor and capital structure as well as liquidity on CAR, with the value of R^2 resulted from the model is 47.84%.

Partial Hypothesis

Table 7 PARTIAL TESTING OF HYPOTHESIS 1A				
Hypothesis	β_{ij}	t-Statistic	Prob	Description
BIRATE	968.9789	2.729759	0.0076	Significant
INFLATION	0.657810	0.677956	0.4996	Not Significant
EXCHANGE RATE	-0.000332	-0.247051	0.8054	Not Significant
INTERBANK OVERNIGHT (O/N) RATE	1.318105	2.598285	0.0109	Significant
DTA	-87.57441	-2.566569	0.0119	Significant
DTE	-0.020530	-3.188469	0.0020	Significant
DPKTE	0.028914	2.351205	0.0209	Significant
LP	70.96147	2.822885	0.0059	Significant
LI	-35.74618	-1.039291	0.3015	Not Significant

Partially only BIRATE, Interbank Overnight (O/N) Rate, DTA, DTE, DPKTE and LP which have a significant effect on CAR (Table 7).

Macroeconomic, Capital Structure & Liquidity to ROA

Model of Common (Pool) Effect or Fixed Effect

The test is done by Chow-Test with hypothesis:

H_0 : Model uses common effect model.

H_1 : Model uses fixed effect model.

Tabel 8 RESULT OF CHOW TEST OF HYPOTHESIS 1B			
Hypothesis	F count	Prob	Conclusion
Hypothesis 1b	9.239678	0.0000	H_0 rejected; Fixed Effect

The calculation results $Prob < \alpha$ (0.05), so that can be concluded that H_1 is accepted, so the model used in this study is fixed effect model (Table 8).

The next process is selecting best panel model that still need to continue with Hausman Test to find out whether the model of panel data follows fixed effect model or random effect model.

Model of Fixed Effect or Random Effect

The test is done by Hausman test with hypothesis:

H_0 : Model uses random effect model.

H_1 : Model uses fixed effect model.

Table 9 RESULT OF HAUSMAN TEST OF HYPOTESIS 1B			
Hypothesis	Statistic $U_{ij} \chi^2$	Prob	Conclusion
Hypothesis 1b	0.0000	1.0000	H_0 accepted Random Effect

Based on the above Table 9 it is known that p value $> \alpha$ (0.05), so that H_0 is accepted, then it can be concluded that the data more precisely to use random effect model.

Model of Common Effect or Random Effect

The test done by Hausman test with hypothesis:

H_0 : Model uses common effect model.

H_1 : Model uses random effect model.

Table 10			
RESULT OF LAGRANGE MULTIPLIER (LM) TEST OF HYPOTHESIS 1B			
Hypothesis	Statistic Lagrange Multiplier (LM)	Prob	Conclusion
Hypothesis 1b	72.69979	0.0000	H ₀ rejected Random Effect

Based on the above Table 10, it is known that $p \text{ value} < \alpha (0.05)$ so that H₀ is rejected, it can be concluded that the data more precisely to use random effect model.

Table 11				
RESULT OF RANDOM EFFECT ESTIMATION OF HYPOTHESIS 1B				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.755719	3.163573	-0.871078	0.3861
BIRATE	182.1704	30.01244	6.069828	0.0000
INFLATION	0.023615	0.082482	0.286307	0.7753
EXCHANGE RATE	-0.000486	0.000114	-4.248783	0.0001
INTERBANK OVERNIGHT (O/N) RATE	-0.233849	0.212903	-1.098386	0.2750
DTA	0.323598	2.666179	0.121371	0.9037
DTE	-0.001567	0.000545	-2.876799	0.0050
DPKTE	0.002760	0.001042	2.648363	0.0096
LP	-3.620585	1.548350	2.338351	0.0215
LI	-1.248571	2.766482	-0.451321	0.6529
Effects Specification			S.D.	Rho
Cross-section random			0.576867	0.0994
Idiosyncratic random			1.736276	0.9006
Weighted Statistics				
R-squared	0.520387	Mean dependent var	2.491038	
Adjusted R-squared	0.471887	S.D. dependent var	2.802090	
S.E. of regression	2.039267	Sum squared resid	370.1161	
F-statistic	10.72959	Durbin-Watson stat	0.940878	
Prob(F-statistic)	0.000000			

The test results in Table 11 of Econometric Model are:

$$ROA_{it} = -2.755719 + 182.1704BIRATE_{it} + 0.023615INFL_{it} - 0.000486EXCH_{it} - 0.233849ONINT_{it} + 0.323598DTA_{it} - 0.001567DTE_{it} + 0.002760DPKTE_{it} - 3.620585LP_{it} - 1.248571LI_{it} + e_{13it}$$

The regression equation above is in line with the hypothesis proposed that the increasing of macroeconomics factors and capital structure as well as liquidity will improve ROA (performance).

Simultaneous Hypothesis (2)

H_0 : $\beta_{61} = \beta_{62} = \beta_{63} \dots \beta_{67} = 0$; there is no effect of macroeconomics factor and capital structure as well as liquidity on ROA.

H_1 : At least there is $\beta_{ij} \neq 0$; there is the effect of macroeconomics factor and capital structure as well as liquidity on ROA.

Table 12
SIMULTANEOUS TESTING OF HYPOTHESIS 1B

Hypothesis	F-statistic	Prob(F-statistic)	Description
Hypothesis 1b	10.72959	0.0000*	H ₀ rejected

*Significant at $\alpha=0.05$

The result in Table 12 of testing shows that simultaneously there is the effect of macroeconomic factor and capital structure as well as liquidity on ROA, with the value of R² resulted from the model is 52.04%.

Partial Hypothesis

Table 13
PARTIAL TESTING OF HYPOTHESIS 1B

Hypothesis	β_{ii}	t-Statistic	Prob	Description
BIRATE	182.1704	6.069828	0.0000	Significant
INFLATION	0.023615	0.286307	0.7753	Not Significant
EXCHANGE RATE	-0.000486	-4.248783	0.0001	Significant
INTERBANK OVERNIGHT (O/N) RATE	-0.233849	-1.098386	0.2750	Not Significant
DTA	0.323598	0.121371	0.9037	Not Significant
DTE	-0.001567	-2.876799	0.0050	Significant
DPKTE	0.002760	2.648363	0.0096	Significant
LP	-3.620585	2.338351	0.0215	Significant
LI	-1.248571	-0.451321	0.6529	Not significant

Partially only BIRATE, Exchange Rate, DTE, DPKTE and LP which have a significant effect on ROA (Table 13).

Macroeconomic, Capital Structure & Liquidity to ROE

Model of Common (Pool) Effect or Fixed Effect

The test is done by Chow-Test with hypothesis:

H_0 : Model uses common effect model.

H_1 : Model uses fixed effect model.

Table 14
RESULT OF CHOW TEST OF HYPOTHESIS 1C

Hypothesis	F count	Prob	Conclusion
Hypothesis 1c	12.258481	0.0000	H ₀ rejected; Fixed Effect

The calculation results $\text{Prob} < \alpha (0.05)$, so that can be concluded that H₁ is accepted, so the model used in this study is fixed effect model (Table 14).

The next process is selecting best panel model that still need to continue with Hausman Test to find out whether the model of panel data follows fixed effect model or random effect model.

Model of Fixed Effect or Random Effect

The test is done by Hausman test with hypothesis:

H_0 : Model uses random effect model.

H_1 : Model uses fixed effect model.

Tabel 15 RESULT OF HAUSMAN TEST OF HYPOTESIS 1C			
Hypothesis	Statistic $U_{ij} \chi^2$	Prob	Conclusion
Hypothesis 1c	0.0000	1.0000	H_0 accepted Random Effect

Based on the above Table 15 it is known that $p \text{ value} > \alpha (0.05)$, so that H_0 is accepted, then it can be concluded that the data more precisely to use random effect model.

Model of Common Effect or Random Effect

The test done by Hausman test with hypothesis:

H_0 : Model uses common effect model.

H_1 : Model uses Random effect model.

Table 16 RESULT OF LAGRANGE MULTIPLIER (LM) TEST OF HYPOTHESIS 1C			
Hypothesis	Statistic Lagrange Multiplier (LM)	Prob	Conclusion
Hypothesis 1c	96.91325	0.0000	H_0 rejected Random Effect

Based on the above Table 16 it is known that $p \text{ value} < \alpha (0.05)$ so that H_0 is rejected, it can be concluded that the data more precisely to use random effect model.

Table 17 RESULT OF RANDOM EFFECT ESTIMATION OF HYPOTHESIS 1C				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.372930	18.59716	-0.288911	0.7733
BIRATE	905.5274	140.4776	6.446061	0.0000
INFLATION	-0.151358	0.376486	-0.402027	0.6886
EXCHANGE RATE	-0.002490	0.000520	-4.791602	0.0000
INTERBANK OVERNIGHT (O/N) RATE	-2.401873	0.978840	-2.453796	0.0161

DTA	0.662717	17.30920	0.038287	0.9695
DTE	-0.006850	0.002530	-2.706904	0.0081
DPKTE	0.011674	0.004813	2.425675	0.0173
LP	-26.07934	10.88442	-2.396025	0.0187
LI	-20.50477	15.52283	-1.320943	0.1899
Effects Specification			S.D.	Rho
Cross-section random			7.910843	0.5042
Idiosyncratic random			7.844646	0.4958
Weighted Statistics				
R-squared	0.599487	Mean dependent var	4.100622	
Adjusted R-squared	0.558985	S.D. dependent var	12.03884	
S.E. of regression	7.997622	Sum squared resid	5692.615	
F-statistic	14.80165	Durbin-Watson stat	1.175829	
Prob(F-statistic)	0.000000			

The test results in Table 17 of Econometric Model are:

$$ROE_{it} = -5.372930 + 905.5274BIRATE_{it} - 0.151358INFL_{it} - 0.002490EXCH_{it} - 0.401873ONINT_{it} + 0.662717DTA_{it} - 0.006850DTE_{it} + 0.011674DPKTE_{it} - 26.07934LP_{it} - 20.50477LI_{it} + e_{14it}$$

The regression equation above is in line with the hypothesis proposed that the increasing of macroeconomics factors and capital structure as well as liquidity will improve ROE (Performance).

Simultaneous Hypothesis (3)

H_0 : $\beta_{71} = \beta_{72} = \beta_{73} \dots \beta_{77} = 0$; there is no effect of macroeconomics factor and capital structure as well as liquidity on ROE.

H_1 : At least there is $\beta_{ij} \neq 0$; there is the effect of macroeconomics factor and capital structure as well as liquidity on ROE.

Hypothesis	F-statistic	Prob(F-statistic)	Description
Hypothesis 1c	14.80165	0.0000*	H ₀ rejectes

*Significant at $\alpha=0.05$

The result in Table 18 of testing shows that simultaneously there is the effect of macroeconomic factor and capital structure as well as liquidity on ROE, with the value of R^2 resulted from the model is amounted to 59.95%.

Partial Hypothesis

Hypothesis	β_{ii}	t-Statistic	Prob	Description
BIRATE	905.5274	6.446061	0.0000	Significant
INFLATION	-0.151358	-0.402027	0.6886	Not Significant
EXCHANGE RATE	-0.002490	-4.791602	0.0000	Significant
INTERBANK OVERNIGHT (O/N) RATE	-2.401873	-2.453796	0.0161	Significant
DTA	0.662717	0.038287	0.9695	Not Significant
DTE	-0.006850	-2.706904	0.0081	Significant
DPKTE	0.011674	2.425675	0.0173	Significant
LP	-26.07934	-2.396025	0.0187	Significant
LI	-20.50477	-1.320943	0.1899	Not Significant

Partially only BIRATE, Exchange Rate, Interbank Overnight (O/N) Rate, DTE, DPKTE and LP which have a significant effect on ROE (Table 19).

Macroeconomic, Capital Structure & Liquidity to NIM

Model of Common (Pool) Effect or Fixed Effect

The test is done by Chow-Test with hypothesis:

H_0 : Model uses common effect model.

H_1 : Model uses fixed effect model.

Hypothesis	F hitung	Prob	Conclusion
Hypothesis 1d	6.991251	0.0000	H_0 rejected; Fixed Effect

The calculation results $\text{Prob} < \alpha$ (0.05) so that can be concluded that H_1 is accepted, so the model used in this study is fixed effect model (Table 20).

The next process is selecting best panel model that still need to continue with Hausman Test to find out whether the model of panel data follows fixed effect model or random effect model.

Model of Fixed Effect or Random Effect

The test is done by Hausman test with hypothesis:

H_0 : Model uses random effect model.

H_1 : Model uses fixed effect model.

Hypothesis	Statistik $U_{ii} \chi^2$	Prob	Conclusion
Hypothesis 1d	0.0000	1.0000	H ₀ accepted Random Effect

Based on the above Table 21 it is known that p value > α (0.05) so that H₀ is accepted, then it can be concluded that the data more precisely to use random effect model.

Model of Common Effect or Random Effect

The test done by Hausman test with hypothesis:

H_0 : Model uses common effect model.

H_1 : Model uses random effect model.

Hypothesis	Statistic Lagrange Multiplier (LM)	Prob	Conclusion
Hypothesis 1d	29.62981	0.0000	H ₀ rejected Random Effect

Based on the above Table 22 it is known that p value < α (0.05) so that H₀ is rejected, then it can be concluded that the data more precisely to use random effect model.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-13.48899	4.160675	-3.242019	0.0017
BIRATE	272.9219	36.63059	7.450656	0.0000
INFLATION	0.062627	0.099858	0.627159	0.5322
EXCHANGE RATE	-0.000346	0.000138	-2.505321	0.0141
INTERBANK OVERNIGHT (O/N) RATE	-0.382705	0.158209	2.418984	0.0175
DTA	4.187919	1.656723	2.527833	0.0132
DTE	-0.000113	0.000664	-0.169540	0.8658
DPKTE	0.000276	0.001267	0.217478	0.8283
LP	2.731567	1.333774	2.047998	0.0434
LI	2.071330	3.630298	0.570568	0.5697
Effects Specification			S.D.	Rho
Cross-section random			1.006976	0.1878
Idiosyncratic random			2.094304	0.8122
Weighted Statistics				
R-squared	0.580744	Mean dependent var	2.597837	
Adjusted R-squared	0.538348	S.D. dependent var	3.372903	
S.E. of regression	2.290624	Sum squared resid	466.9795	
F-statistic	13.69788	Durbin-Watson stat	1.064136	

Table 23 RESULT OF RANDOM EFFECT ESTIMATION OF HYPOTHESIS 1D	
Prob(F-statistic)	0.000000

The test results in Table 23 of Econometric Model are:

$$NIM_{it} = -13.48899 + 272.9219BIRATE_{it} + 0.062627INFL_{it} - 0.000346EXCH_{it} - 0.382705ONINT_{it} + 4.187919DTA_{it} - 0.000113DTE_{it} + 0.000276DPKTE_{it} - 2.731567LP_{it} + 2.071330LI_{it} + e_{it}$$

The regression equation above is in line with the hypothesis proposed that the increasing of macroeconomics factors and capital structure as well as liquidity will improve NIM (Kinerja). Simultaneous Hypothesis (4)

H_0 : $\beta_{81} = \beta_{82} = \beta_{83} \dots \beta_{87} = 0$; there is no effect of macroeconomics factor and capital structure as well as liquidity on NIM.

H_1 : At least there is $\beta_{ij} \neq 0$; there is the effect of macroeconomics factor and capital structure as well as liquidity on NIM.

Table 24 SIMULTANEOUS TESTING OF HYPOTHESIS 1D			
Hypothesis	F-statistic	Prob(F-statistic)	Description
Hypothesis 1d	13.69788	0.0000*	H_0 rejected

*Significant at $\alpha=0.05$

The result of testing shows that there is the simultaneous effect of macroeconomics factor and capital structure as well as liquidity on NIM, with the value of R^2 resulted from the model is 58% (Table 24).

Partial Hypothesis

Table 25 PARTIAL TESTING OF HYPOTESIS 1D				
Hypothesis	β_{ii}	t-Statistic	Prob	Description
BIRATE	272.9219	7.450656	0.0000	Significant
INFLATION	0.062627	0.627159	0.5322	Not Significant
EXCHANGE RATE	-0.000346	-2.505321	0.0141	Significant
INTERBANK OVERNIGHT (O/N) RATE	-0.382705	2.418984	0.0175	Significant
DTA	4.187919	2.527833	0.0132	Significant
DTE	-0.000113	-0.169540	0.8658	Not Significant
DPKTE	0.000276	0.217478	0.8283	Not Significant
LP	2.731567	2.047998	0.0434	significant
LI	2.071330	0.570568	0.5697	Not Significant

Partially only BIRATE, Exchange Rate, Interbank Overnight (O/N) Rate, DTA and LP which have a significant effect on ROE (Table 25).

CONCLUSION AND RECOMMENDATION

Conclusion

Macroeconomic factor, Capital Structure and liquidity simultaneously effect on the performance of foreign bank in Indonesia. Partially:

1. BIRATE, Interbank Overnight (O/N) Rate, DTA, DTE, DPKTE and Precautionary liquidity which have a significant effect on CAR.
2. BIRATE, Exchange Rate, DTE, DPKTE and LP which have a significant effect on ROA.
3. BIRATE, Exchange Rate, Interbank Overnight (O/N) Rate, DTE, DPKTE and LP which have a significant effect on ROE.
4. BIRATE, Exchange Rate, INTERBANK OVERNIGHT (O/N) RATE, DTA and LP which have a significant effect on ROE.

Recommendation

The result of this study is expected to be a recommendation for the management of foreign banks in increasing their performance especially ROE and NIM through the increase of liquidity. This finding is resulted from the unit of analysis of foreign bank listed in Financial Service Authority, so the next research can be study by taking the unit of analysis of national banking.

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