

AN ANALYSIS OF LOCAL AND FOREIGN BANKS PROFITABILITY IN MALAYSIA

Vikniswari Vija Kumaran *, Chin Wei Sheng, Toh B Bee, Tan Kit Yeng and Sai Mei Ling
Department of Economics, Faculty of Business and Finance, Universiti Tunku Abdul Rahman,
Perak, Malaysia. Email: vikniswari88@gmail.com

Abstract: This study will analyze the profitability of the local and foreign banks in Malaysia by the internal and macroeconomic perspective using the Pooled OLS Method, Fixed Effect Method and Random Effect Method. The study found out that only 8 variables are significant for the local banks and 6 variables are significant for the foreign banks. The panel data has been used during 2007 until 2016. Inflation Rate and Real Interest are negatively influence the movement of the bank's profitability.

Key words: *bank's profitability, female board of directors, ROA, ROE, bank size, lending rate, operating expenses, inflation rate, real interest rate, GDP and exchange rate*

1. Introduction

Bank is a financial institution which provides the financial services and help in developing the country's economy. Therefore, if the bank does not perform well in the market, it will cause the country's economic falls [1]. Moorad Choudhry [2] said that the biggest challenge that faced by banks in 2017 is to stay engaged with the customer. Therefore, bank sectors improve their services based on the statement stated. Based on the research of Deming-Kunt and Detregiache [3], they mentioned that bank profitability is an important indicator to forecast the financial crises occurs. Therefore, study on the determinate of bank's profitability has become an important issue. This will help the bank to understand more about the current conditions of the banking industry market and beware of the factors that they should consider while making decisions. Moreover, the bank creates new polices for recovery or improvement of their banking system based on their profitability. The objective of this research will carry out to find out that the relationship between the internal and macroeconomic factors on the Bank's profitability in the 8 local banks and 7 foreign banks in Malaysia with the period from year 2007 to year 2016.

2. Literature Review

This study was attempted to examine bank size as potential bank special influential on bank profitability. Bank profitability can be expressed by both internal and external factor [4]. Based on the economic model, bank size was chosen as independent variable and bank profitability as dependent variable. Furthermore, there are also negative effect on the profitability which the size of bank will not be affected by any type of the profitability in the commercial bank Syafri [4] and Hassan and Bashir [5]. When the size of the bank to a certain degree of impact, any fluctuate of the size of the bank will bring about negative related to bank profitability.

Sehrish et al. [6] also mentioned that the results were used net income as operating efficiency to measure the economic model and it found there are positively relationship that the bank performance are affect by the operating expenses. Interest rate is the most influential that is used to achieve the macroeconomics goals and monetary policy. There is various type of the lending rate will influence bank profitability which in balance sheet of bank, securities to purchase and cash reserve. According to Maigua and Mouni [7] was mentioned that

Corresponding Author: Vikniswari Vija Kumaran, Department of Economics, Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Perak, Malaysia. Email: vikniswari88@gmail.com

there was a sample data of 43 licensed commercial banks in Kenya country to represent it. Hence, commercial bank may decide to increase the interest rate of bank more than to the customer deposit rate when the central bank increases their discount rate.

Based on the studies indicates that effect of return on asset (ROA) on bank profitability. These empirical findings are supported by the researchers [8-10]. Taani [10] found that the correlation between capital structure and performance of Jordanian bank is positively from 2007 to 2011. One of the factors that effect on the profitability of bank is return on equity (ROE). These studies are supported by researchers [11-15].

In this era, women are given the opportunities to develop themselves by morally, intellectually and socially. They were being well educated. Besides, women can help to achieve a better business financial result. Gender diversity in Board of Director can bring higher profits to the bank Yasir, Saba and Hina [16]. The different perspectives of female directors will increase the effectiveness of the problem solving. In addition, female perform well in interactions with people which helped the company to retain and expand human resources [17].

Foreign exchange market was established in order to meet the requirement of large volume of foreign exchange transactions by banks [18]. Furthermore, Combey & Togbenou [19] concluded that exchange rate had significant effect on bank profitability. The effect in the short run is greater than long run. According to Duraj and Moci [20] examine the banking sector in Albania, they stated that increase of the GDP of the country have positive influences in the Albania bank's profitability. Although inflation will discourage investor and also

create negative impact to the market yet there is positively relationship between profitability of bank and inflation of Pakistan's banks. Claessens, Coleman and Donnelly [21] examines the impact of low interest rates on 3,385 banks taken from over 47 countries over the period of 2005 to 2013, found that low interest rate have is significantly and have greater impact on bank's net interest margin than high interest rates.

3. Materials and Methods

This study obtained the data from the World Bank and the annual reports from 2007 to 2016. Models used for this study as follows:

Internal Factors Model

Local Banks (Model 1):

$$Net\ profit_{it} = \beta_1 + \beta_2 BOD_{it} + \beta_3 LR_{it} + \beta_4 Bank\ Size_{it} + \beta_5 ROA_{it} + \beta_6 ROE_{it} + \beta_7 OE_{it} + \mu_{it}$$

Foreign Banks (Model 2):

$$Net\ profit_{it} = \beta_1 + \beta_2 BOD_{it} + \beta_3 LR_{it} + \beta_4 Bank\ Size_{it} + \beta_5 ROA_{it} + \beta_6 ROE_{it} + \beta_7 OE_{it} + \mu_{it}$$

Macro Factors Model

Local Banks (Model 3):

$$Net\ profit_t = \beta_1 + \beta_2 IR_t + \beta_3 RL_t + \beta_4 GDP_t + \beta_5 ER_t + \mu_t$$

Foreign Banks (Model 4):

$$Net\ profit_t = \beta_1 + \beta_2 IR_t + \beta_3 RL_t + \beta_4 GDP_t + \beta_5 ER_t + \mu_t$$

The 15 selected banks are all operating in Malaysia regarding it is local or foreign, thus it will be affect by the macroeconomics variables of Malaysia.

4. Result

As shown in Table 4.1, Levin-Lin-Chu [22] test for the Local bank with data period from year 2007-2016, the null hypothesis of Levin-Lin-Chu [22]. Thus we can conclude that all the variables are stationary computed by using Levin-Lin-Chu [22].

Table 4.1: Unit Root Test Result (Local Bank with Data Period from year 2007-2016)

Variables	LLC Test			
	Level		First Difference	
	Intercept	Intercept + Trend	Intercept	Intercept + Trend
Net Profit	-2.639** (0.004)	-1.754** (0.040)	-3.391*** (0.000)	-11.548*** (0.000)
Bank Size	-4.978*** (0.000)	-0.447 (0.327)	-4.742*** (0.000)	-5.496*** (0.000)

ROE	0.344 (0.635)	-1.171 (0.121)	-4.551*** (0.000)	-8.514*** (0.000)
ROA	-3.960*** (0.000)	-4.078*** (0.000)	-5.585*** (0.000)	-5.888*** (0.000)
OE	-2.566*** (0.005)	-2.273** (0.012)	-5.913*** (0.000)	-7.626*** (0.000)
LR	-4.640*** (0.000)	- 27.946*** (0.000)	-33.954*** (0.000)	-45.689*** (0.000)
BOD	0.124 (0.549)	-1.810** (0.035)	-2.442*** (0.007)	-22.340*** (0.000)

Notes: *, ** and *** implies that the rejection of the null hypothesis of non-stationary at 10%, 5% and 1% significant level respectively.

Table 4.2: Unit Root Test Result (Foreign Bank with Data Period from year 2007-2016)

Variables	LLC Test			
	Level		First Difference	
	Intercept	Intercept + Trend	Intercept	Intercept + Trend
Net Profit	-1.759** (0.039)	-4.735*** (0.000)	-2.201** (0.014)	-5.843*** (0.000)
Bank Size	- 2.549*** (0.007)	-2.051*** (0.020)	-5.660*** (0.000)	-8.344*** (0.000)
ROE	- 4.030*** (0.000)	-3.642*** (0.000)	-4.246*** (0.000)	-5.983*** (0.000)
ROA	-1.744** (0.041)	-8.050*** (0.000)	- 10.802*** (0.000)	- 15.362*** (0.000)
OE	- 7.934*** (0.000)	-39.925*** (0.000)	- 28.036*** (0.000)	- 19.112*** (0.000)
LR	- 3.863*** (0.000)	-31.889*** (0.000)	- 34.105*** (0.000)	- 40.572*** (0.000)
BOD	- 2.785*** (0.003)	- 3.621*** (0.000)	- 3.703*** (0.000)	- 6.418*** (0.000)

Notes: *, ** and *** implies that the rejection of the null hypothesis of non-stationary at 10%, 5% and 1% significantly level respectively.

Table 4.3: Unit Root Test Result (Macroeconomic Variables with Data Period from year 2007-2016)

Variables	LLC Test			
	Level		First Difference	
	Intercept	Intercept + Trend	Intercept	Intercept + Trend
Net Profit	-4.7696*** (0.000)	-7.4413*** (0.000)	-17.111*** (0.000)	-26.009*** (0.000)
RL	-11.843*** (0.000)	-9.934*** (0.000)	-16.012*** (0.000)	-15.382*** (0.000)
GDP	-10.624*** (0.000)	-16.946*** (0.000)	-30.811*** (0.000)	-54.416*** (0.000)
IR	-61.596*** (0.000)	-61.515*** (0.000)	-69.128** (0.000)	-57.168*** (0.000)
ER	-4.164*** (0.000)	-3.773*** (0.000)	-16.560*** (0.000)	-33.277*** (0.000)

Notes: *, ** and *** implies that the rejection of the null hypothesis of non-stationary at 10%, 5% and 1% significant level respectively.

Table 4.4: Estimate for (POLS), FEM and REM (Model 1 and Model 2)

Models	Model 1 (Local Banks)			Model 2 (Foreign Banks)		
	POLS	FEM	REM	POLS	FEM	REM
C	- 15.76850*** (0.0083)	-12.21128** (0.0149)	- 15.76850*** (0.0012)	-18.46490** (0.0132)	21.89305*** (0.0004)	- 18.46490*** (0.0020)
BOD	0.124683** (0.0225)	0.111459** (0.0194)	0.124683*** (0.0049)	1.611396** (0.0145)	1.631237*** (0.0076)	1.611396*** (0.0023)
LR	2.795932*** (0.0009)	1.610388** (0.0204)	2.795932*** (0.0001)	2.853620** (0.0131)	1.768781* (0.0657)	2.853620*** (0.0020)
Bank Size	6.08E-06*** (0.0044)	2.54E-05*** (0.0000)	6.08E-06*** (0.0005)	6.22E-05*** (0.0099)	0.000129*** (0.0000)	6.22E-05*** (0.0013)
ROA	13.12699*** (0.0000)	12.17786*** (0.0000)	13.12699*** (0.0000)	3.509029* (0.0576)	7.972650*** (0.0004)	3.509029** (0.0175)
ROE	- 0.726242*** (0.0000)	-0.573654*** (0.0007)	- 0.726242*** (0.0000)	-0.030455 (0.7568)	0.132519 (0.2195)	-0.030455 (0.6960)
OE	0.001079 (0.3407)	0.000682 (0.5497)	0.001079 (0.2362)	-7.00E-05 (0.6690)	-0.000192 (0.2488)	-7.00E-05 (0.5897)
R-squared	0.541412	0.732715	0.541412	0.351582	0.631603	0.351582
Adjusted R-squared	0.503719	0.680068	0.503719	0.289827	0.554045	0.289827
F-statistic	14.36402***	13.91748***	14.36402***	5.693246***	8.143685***	5.693246***
VIF	2.180607	3.74132	2.180607	1.542215	2.71446	1.542215
Hausman Test		47.238004 (0.0000)			43.326045 (0.0000)	

Note: *, ** and *** implies that the rejection of the null hypothesis of non-stationary at 10%, 5% and 1% significant level respectively.

Table 4.5: Estimate for (POLS), FEM and REM (Model 3 and Model 4)

Models	Model 3 (Local Banks)			Model 4 (Foreign Banks)		
	POLS	FEM	REM	POLS	FEM	REM
C	1.286333 (0.5140)	-0.550424 (0.8031)	1.286333 (0.5216)	2.702429 (0.2669)	0.673892 (0.8033)	2.702429*** (0.2719)
IR	-0.437589 (0.3222)	-0.305080 (0.5127)	-0.437589 (0.3309)	1.004401* (0.0696)	1.325405** (0.0238)	1.004401 (0.0725)
RL	0.049241 (0.7072)	0.105442 (0.4497)	0.049241 (0.7123)	0.179955 (0.2686)	0.282617 (0.1021)	0.179955* (0.2736)
GDP	0.547963*** (0.0004)	0.638329*** (0.0001)	0.547963*** (0.0005)	0.374985** (0.0461)	0.477413** (0.0173)	0.374985*** (0.0483)
ER	2.435688*** (0.0000)	2.776520*** (0.0000)	2.435688*** (0.0000)	1.079387* (0.0813)	1.289221* (0.0525)	1.079387* (0.0845)
R-squared	0.276878	0.320051	0.276878	0.155980	0.217608	0.155980
Adjusted R-squared	0.238311	0.210060	0.238311	0.104040	0.084999	0.104040
F-statistic	7.179232***	2.909778***	7.179232***	3.003090**	1.640974	3.003090**
VIF	1.382893	1.470699	1.382893	1.18406	1.278132	1.184806
Hausman Test		4.317670 (0.3647)		4.647356 (0.3254)		

Note: *, ** and *** implies that the rejection of the null hypothesis of non-stationary at 10%, 5% and 1% significant level respectively.

The Table 4.5 shows the results of the POLS, FEM and REM results for the Model 1 (Local Banks) and Model 2 (Foreign Banks). The POLS test showed that Female Board of Directors, Lending Rate, ln Bank Size, ROA and ROE are significant with the bank's profitability in Model 1. By using the same independent variables to test in FEM and REM test, the results also showed that Female Board of Directors, Lending Rate, ln Bank Size, ROA and ROE are significant with the bank's profitability in Model 1. For the Model 2 (foreign banks), the Table 4.5 showed that Female Board of Directors, Lending Rate, ln Bank Size and ROA are significant with the bank's profitability through the POLS, FEM and REM tests. ROE and the ln Operating Expenses are the only two variables insignificant with the bank's profitability through the three tests. In the model 1 and 2, there is significant positive relation to be found between female board of director and bank's profitability at local and foreign bank that operate in Malaysia. The result is to be consistent with the study [23] who said a company having women on the board will be more creative, innovative and transparent whereas the company could have achieved better performance.

Also, in the model 3 and 4, the gross domestic product after the test is found to have positive significant relationship with local and foreign bank's profitability. The result is proved and agreed in the study Gul, Irshad and Zaman [24], where they explained when economic growth tend to boost the demand of consumer for loan and encourage the banks to increase the amount of loan to lend out with higher rate. Besides, in the model 3 and 4, there is a positive significant relationship between the exchange rate and the local and foreign bank's profitability. According to the study by Taiwo and Adesolo [25], exchange rate is found having positively influence toward the bank's profit. A country with stable exchange rate policy and appropriate lending rules can stimulate the bank's performance.

Moreover, in the model 1 and 2, the operating expenses has an insignificant relationship with bank's profitability in local and foreign bank in Malaysia. The result is proved by the study in Honohan and Beck [26], where financial crisis directly results which a bank has bad debt which predict the loan will become a bad debt

in the future and it may demonstrate operating expense have insignificant relationship with bank profitability. In the model 3 and 4, interest rate has insignificant relationship with local and foreign banks' profitability. The results show that interest only has small effect on the bank which are small-sized. Therefore, we can say that there will be less or no effect to the banks' profitability in Malaysia [27].

In the model 5 and 6, inflation has found that there is insignificant relationship with lending rate for local and foreign bank that operates in Malaysia. Based on the research result, the fluctuation of inflation rate will not affect lending rate [28-29]. Moreover, the increase in exchange rate lead to increasing the value of own currency. However, the foreign bank is operated in Malaysia and use Malaysia currency for their financial transaction. This study concluded that the condition of inflation in the total demands of loan, the status of the macroeconomic environment, the growth of the economic, and also the foreign exchange rates in Malaysia have great influenced on the lending rate in Malaysia Commercial banks.

CONCLUSION

In this study, the main differs between our study with most of the previous researchers is we using the Female Board of Directors as one of the independent variable. The empirical results also suggest us that there is a significant positive relationship between the Female Board of Directors and the bank's profitability. Other variables also showed that they are significant with the bank's profitability, just the Inflation Rate, Real Interest Rate and Operating Expenses are insignificant for the Local and Foreign Banks.

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