BANK EFFICIENCIES AND NON-PERFORMING LOAN OF COMMERCIAL BANKS IN MALAYSIA

Noraini Ismail[1]
Nur Damia Afiqah Azlan[2]
Maizaitulaidawati Md Husin[3]
Izzaamirah Ishak[4]
Sahaida Laily Md Hashim[5]

Abstract

Paper examines the impacts of bank efficiencies towards Non-Performing Loan (NPL) of commercial banks in Malaysia during the period of 2008 until 2015. The data consists of 7 local commercial banks in Malaysia namely Hong Leong Bank Bhd, Malayan Banking Berhad, RHB Bank, CIMB Bank, Public Bank, Affin Bank and Ambank (M) Berhad. Regression Analysis method is used to test five hypotheses regarding the impacts of return on assets, loan of assets, provision loan and losses, bank size and non-interest income towards NPL. In total, return on assets was found to be not giving any significant impacts towards NPL. While for loan of assets and bank size were found to be negatively significant impacts towards NPL. However, for provision loan and losses and non-interest income, they were both gave positively significant impacts towards NPL. The finding clearly indicates that an increase in bank efficiencies decreases NPL.

Keywords: *Non-Performing Loan, bank efficiencies, local commercial banks*

[1] College of Business Management and Accounting, Universiti Tenaga Nasional, 26700 Muadzam Shah, Pahang, Tel: +6094552020 E-mail: Ainis@uniten.edu.my

[2] College of Business Management and Accounting, Universiti Tenaga Nasional, 26700 Muadzam Shah, Pahang, Tel: +6094552020 E-mail: damiaazlan95@gmail.com

[3] International Business School, Universiti Teknologi Malaysia, 54100 Kuala Lumpur, Tel: +60321805048 E-mail: maizaitulaidawati@gmail.com

[4] College of Business Management and Accounting, Universiti Tenaga Nasional, 26700 Muadzam Shah, Pahang, Tel: +6094552020 E-mail: Izza@uniten.edu.my

[5] College of Business Management and Accounting, Universiti Tenaga Nasional, 26700 Muadzam Shah, Pahang, Tel: +6094552020 E-mail: Sahaida@uniten.edu.my

Introduction

In Malaysia, the landscape of banking sector has undergone major structural change in the era of globalization with various liberalization measures being introduced during the last decade. This includes the changes of policy by the bank and how the bank's scope of work has evolved to achieve the objectives more effectively. As for knowledge of the underlying factors that influence the performance of the banking sector is essentials for managers of the bank, the central bank, bankers' association, and other financial authorities to help them formulate policies to improve the performance of the banking sector (Sufian & Kamarudin, 2016; Karim et. al. 2010). These factors are expected to have an impact on the efficiency of the banking sector.

Statistic from the World Bank shows that banks Non-Performing Loans (NPL) to total gross loans decreasing from 16.6% in year 1999 to 1.6% in year 2015. An increase in NPL will affect the bank's profitability and liquidity which are the main components for the efficiency of the bank. An increase problem in loans also will lead to a negative impact on bank efficiencies. Bank insolvency has been a significant problem in many countries all over the world (Dimitrios et. al., 2016). It is argued that it will have a detrimental effect since such banks will exert additional managerial effort and give additional expense dealing with these loans (Karim et. al., 2010).

Since the economic downturn in 1997 which gives huge impact to many countries including Malaysia, the concepts of NPL are widely discussed among the economist. But recently, the studies on NPL are not taken into account, although NPL is a critical component that impacts the development of commercial banking as well as other financial institutions. According to assertion by Cheng & Hossain (2001), many businesses faced difficulties and caused unemployment rate to rise from 2.6% in year 1997 to 3.9% in year 1998.

Furthermore, banking sector control most of the financial flows and accounts for more than 70% of the financial system's total assets. Therefore, it is reasonable to expect that an efficient and profitable banking sector may help ensure an effective financial system which is conductive to economic growth and development (Sufian & Kamarudin, 2016). Every banker's objectives are similar where they want to achieve an efficient and effective utilization of resources. The bank efficiency ratio itself is an easy and quick measure of a bank's ability to turn the resources into revenue. Thus, we will be able to identify whether higher NPL reduce the cost efficiency.

Therefore, the objective of this study is to investigate the impact of bank efficiencies towards NPL of commercial banks in Malaysia. This study will provide researchers knowledge on the important factors that give impacts of bank efficiencies towards NPL. Secondly, this study will guide the investors with useful information about the banks in a way that will help them in decision making process of choosing a place to invest. Thirdly, this study will act as a future guidance or reference for future researcher to learn deeper about this topic.

Literature Review

Commercial banks are one of the banking sectors which are the main source of funding to business activities as well as other projects throughout the country. A study done by Gezu (2014), the Non-Performing Loans (NPL) measured a mean of 11.82 percent showing the lowest deviation from its mean value. It indicates that NPL problem is still serious for

commercial banks. Return on Assets (ROA) has no significant impact towards NPL with a minimum of -2.13 and maximum of 11.62 percent with a mean value of 2.52 percent. It was stated that even if high ROA indicates better performance in managing of available assets, commercial banks still shows low performance with regard to ROA. However, Ekanayake and Azeez (2015) found that ROA is significant negative relationship with NPL of licensed commercial banks. Dimitrios *et. al.* (2016) and Repkova (2015) also found that ROA had a negative impact on bank efficiencies in the banking sector.

Furthermore, Omar *et. al.* (2006) investigating on the efficiency of commercial banks in Malaysia during 1997 financial crisis, it seems that local banks were more exposed to the risks than foreign banks operating in Malaysia. During this period, they also found that local banks have higher levels of NPL and loan losses as compared to foreign banks. In addition, loans and advances and total deposits are the most common output and input in the Malaysian banking industry. On the other hand, bank asset quality and operating performance are positively related in every bank. If a bank's asset inadequate, the bank needs to increase its bad debt losses as well as spend more resources on the collection of NPL (Karim *et. al.*, 2010). The finding clearly indicates that higher NPL reduces cost efficiency. Likewise, lower cost efficiency increases NPL.

According to Sufian (2009), the financial institutions were weakened by large-scale exposure to the property sector, high NPL and short-term loans were unhedged against currency movements. It was observed that Loan of Assets (LOA) revealed statistically significant in regression model. The finding implied that banks with higher LOA tend to have higher efficiency scores. Same goes to Provision loan and losses (PLL), they found that PLL over total loans is statistically significant in regression model which is contrast with the finding from Sufian and Kamarudin (2016). Moreover, Sufian and Kamarudin (2016) found that credit risk, overhead expenses and liquidity are not statistically significant in the efficiency of banks operating to the Malaysian banking sector. This phenomenon is consistent with Repkova (2015), their study suggested that bank size, credit risk, number of branches and concentration of banking sector were not statistical significant in the model used. However, Louzis *et. al.*, (2012) found that bank size has statistically significant impacts on NPL. They suggested the regulatory authorities to focus on managerial performance in order to detect banks with potential NPL.

Besides that, bank insolvencies have been a significant problem in many countries all over the world. One of the main reason for bank insolvencies is the asset quality deterioration especially post 2007 (Dimitrios *et. al.*, 2016). Sufian and Kamarudin (2016) claims commercial banks are the main players in banking sector and most significant providers of fund. The empirical findings seem to suggest the coefficient of non-interest income is always positive, implying that Malaysian banks which derived a higher proportion of its income from non-interest sources tend to report higher efficiency levels. Zhu *et. al*. (2015) also explores that non-interest income is the main sources to inefficiency in the banking industry.

Methodology

Data were obtained using secondary data by extracting from Bank Negara Malaysia (BNM) and Thomson Reuters. The data were collected on annual basis for 7 years continuously ranging from 2008 until 2015. The financial data includes Non-Performing Loans (NPL) of the banks, Return on Assets (ROA), loan of assets, provision loan and losses, bank size, and

non-interest income. These sets of data were used to evaluate the effect of bank efficiencies towards NPL for local commercial banks in Malaysia. A total of 8 local commercial banks listed in BNM but only 7 banks were selected because of the limitation of data for one bank. The banks that had been selected are Affin Bank Berhad, AmBank (M) Berhad, CIMB Bank Berhad, Hong Leong Bank Berhad, Malayan Banking Berhad, Public Bank Berhad and RHB Bank Berhad. The research model used in this study is visually shown in Figure 1.
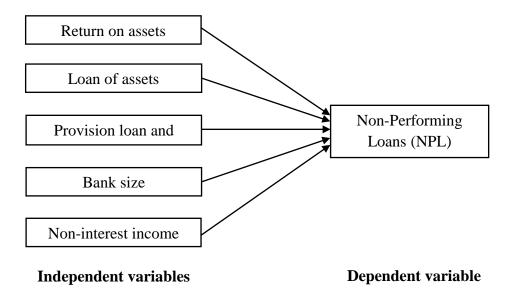

Figure 1. The Research Model

Variables	Proxies
Non-performing loans	NPL ÷ Total loans
Return on assets	Net income ÷ Total assets
Loan of assets	Total loans ÷ Total assets
Provision loan and losses	Provision for bad and doubtful debt ÷ Gross loans
Bank size	Individual banks customers' deposits ÷ Total customers' deposits of LCBs in the country
Non-interest income	Non-interest income ÷ Total income

Table 1. Variables and Proxies

This study used multiple regression analysis to test the impacts on bank efficiencies; return on assets, loan of assets, provision loan and losses, bank size and non-interest income as proxies; towards NPL in Malaysian local commercial banks. The regression models used in this study are as the following:

$$NPL = \alpha_0 + \beta_1(ROA) + \beta_2(LOA) + \beta_3(PLL) + \beta_4(BS) + \beta_5(NII) + \varepsilon$$

(1)

Where:

NPL = dependent variable; α = constant value; β = regression coefficient; ROA = return on assets; LOA = loan of assets; PLL = provision loan and losses; BS = bank size; NII = non-interest income; and ε = residual term

Based on the preceding discussion, five hypotheses are developed:

H1: There is a positive and significant relationship between return on assets towards NPL
H2: There is a positive and significant relationship between loans of assets towards NPL
H3: There is a positive and significant relationship between provision loan and losses towards NPL
H4: There is a positive and significant relationship between bank sizes towards NPL
H5: There is a positive and significant relationship between non-interest incomes towards NPL

Results and Findings

Table 2 presents the correlations of the major constructs used in this study. The results indicate that only provision loan and losses (32.7%) and non-interest income (31.7%) were positively correlated towards Non-Performing Loans (NPL). On the other hand, return on assets (-16.0%), loan of assets (-36.3%) and bank size (-12.0%) were found to be negatively correlated towards NPL.

Variables	NPL	ROA	LOA	PLL	BS	NII
Non-Performing Loans (NPL)	1.000					
Return on Assets (ROA)	-0.160	1.000				
Loan of Assets (LOA)	-0.363	0.115	1.000			
Provision Loan and Losses (PLL)	0.327	-0.074	-0.010	1.000		
Bank Size (BS)	-0.120	-0.143	-0.390	-0.038	1.000	
Non-Interest Income (NII)	0.317	0.063	-0.182	0.214	0.295	1.000

Table 2. Correlation Results

Table 3 presents the multiple regression analysis, in which to examine the impact between NPL and five independent variables. Based on the table 3, provision loan and losses (p-value = 0.049, t = 2.018) and non-interest income (p-value = 0.010, t = 2.674) were found to be positively and significantly related to NPL. On the other hand, loan of assets (p-value = 0.001, t = -3.704) and bank size (p-value = 0.002, t = -3.238) were found to be negatively and significantly related to the NPL. Return on assets (p-value = 0.135, t = -1.520) was found to have negative and insignificant relation to NPL. Adjusted R^2 value for NPL is 0.350 indicating that 35.0 percent of the variation of determinants affecting NPL of commercial banks in Malaysia could be explained by the five independent variables.

Variables	β	t-value	p-value

Return on assets	-0.146	-1.520	0.135
Loan of assets	-0.174	-3.704	0.001
Provision loan and losses	22.472	2.018	0.049
Bank size	-0.352	-3.238	0.002
Non-interest income	0.404	2.674	0.010

$R^2 = 0.410$
Adjusted $R^2 = 0.350$

Table 3. Regression Results

Based on the table 4, only Hypothesis 3 (H3) and Hypothesis 5 (H5) were accepted. Provision Loan and Losses (PLL) and Non-Interest Income (NII) were found to be positively and significantly related to NPL. It was confirmed by findings in Ekanayake and Azeez (2015). Next, Loan of Assets (LOA) and Bank Size (BS) were found to be negatively and significantly related to the NPL. These results were supported by Sufian and Kamarudin (2016). Return on Assets (ROA) was found to have negative and insignificant relation to NPL. This result is consistent with previous study done by Ekanayake and Azeez (2015).

Table 4. Summary of Findings

Conclusion

Bank insolvencies are significant problem in many countries all over the world. One of the main reason for bank insolvencies is the asset quality deterioration especially post 2007 (Dimitrios *et. al.*, 2016). Generally, bank insolvencies are what banks are scared of to face while Non-Performing Loans (NPL) is a common situation that every banks will go through. However, banks that have efficient management will help the banks to maintain their business. Therefore, bank efficiencies will help banks to measure the bank's ability to turn resources into revenues easily. Thus, the objective of this study is to investigate the impacts of banks efficiencies; return on assets, loan of assets, provision loan and losses, bank size and non-interest income as proxies; towards NPL.

Research Objectives	Remark	Result
Positive and significant relationship between ROA towards NPL	Reject H1	Supported
Positive and significant relationship between LOA towards NPL	Reject H2	Supported
Positive and significant relationship between PLL towards NPL	Accept H3	Supported
Positive and significant relationship between BS towards NPL	Reject H4	Supported
Positive and significant relationship between NII towards NPL	Accept H5	Supported

Based on the findings, Provision Loan and Losses (PLL) and non-interest income were found to be positively and significantly related to NPL. The finding implied that banks with higher PLL tend to have higher efficiency scores. The empirical findings seem to suggest the coefficient of non-interest income is always positive, implying that Malaysian banks which derived a higher proportion of its income from non-interest sources tend to report higher efficiency levels. Furthermore, loan of assets and bank size were found to be negatively and significantly related to the NPL. However, return on Assets (ROA) was found to have negative and insignificant relation to NPL. It shows that even if high ROA indicates better performance in managing of available assets, commercial banks still shows low performance with regard to ROA. Hence, Hypothesis 3 (H3) and Hypothesis 5 (H5) were accepted. As a conclusion, the findings clearly indicate that higher NPL reduces cost efficiency. Likewise, lower cost efficiency increases NPL (Karim *et. al.*, 2010).

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