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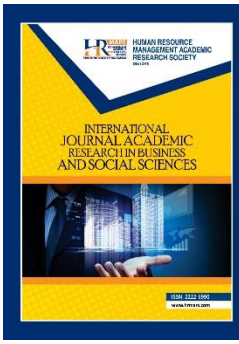
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Non-performing loans and its implications toward Bank Performance: Comparison on Islamic and Conventional Banks

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Abstract: Non-performing loans (NPLs) could be one of the main reasons toward economic and financial instability in the most of the countries in this world. Therefore, this study attempts to discuss the factors that lead to the NPL and hence to see the implications toward bank performance. Many previous studies have solely focused on investigating the determinants of non-performing loans (NPLs) for conventional banks and it seems like there are lack of research were done for Islamic banks industries. According to the past studies, there are two main categories of the factors, which are macroeconomics factors, and bank-specific factors were mentioned as the major determinants of NPLs. By looking at both financial sectors which conventional and Islamic banking sectors, the implications of the NPLs will be find out and thus it aimed to model non-performing loans in a few Asian countries and later do a comparison across the model.

Keywords: Non-performing loans, bank performance, Islamic banks, conventional banks, macroeconomics, bank-specific

INTRODUCTION

The competitiveness of the banking sector is under great pressure to perform well in the current global banking environment, since each bank has to compete with each other locally and internationally. Therefore, Islamic banks not only compete among themselves, but also compete with conventional banks and other non-bank financial institutions. Both conventional and Islamic banks need to satisfy their stakeholders and to ensure their profitability.

The non-performing loans (NPLs) problem frequently acknowledged as one of the potential hazard that may cause globally economic and financial disequilibrium (Onsarigo, Selvan, Ramkumar and Karpagam, 2013). During the crises in late 1990s, NPLs took some banks in Asia to the failure. According to the Financial Stability Institute, addressing the problems of NPLs is a unceasing challenge. Aziz, Ibrahim and Isa (2009) acknowledged that Andrew Crockett (2003) argues that at the

beginning NPLs may not seem in a serious manner to give a negative impact as long as banks remain liquid, and depositors retain their confidence in the system. Over time, however, if the banks are allowed to accrue interest on their NPLs the size of the problem were keep growing.

Non-performing loans (NPLs) were referring to those finance assets which the banks are no longer receive either interest or installment payments as scheduled (Lata, R.S, 2014). It is widely known that higher percentage of NPLs is often associated with the bank failures as well as developed countries. In fact, there is abundant evidence that the financial/banking crises in East Asia and Sub-Saharan African countries were preceded by high NPLs (Khemraj, T. & Pasha, S., 2009).

Most of the ASEAN have faced financial problems after the subprime crisis on 2008 due to borrowers being approved for loans they could not afford. Therefore, this study will help to facilitate the managers about the cause of non-performing loans via knowing the fact through the bank specifics factors and macroeconomics factors that affecting NPLs in ASEAN countries. The purpose of this study is to examine the determinant factors of NPLs in the banking sectors and its implication on banking performance in ASEAN countries. Most of the previous literature, most of the studies on NPLs were carried out based on conventional banking systems (Zurairah Isahak, 2010). Therefore, further research will be carried out in both conventional and Islamic banking systems for comparison purposes.

LITERATURE REVIEW

Loan and Financing

Loan represents 60 percent of most commercial banks' total assets, therefore lending is the principle business activity for most conventional banks (Federal Reserve, 2007). Conversely, Islamic banks are illegal in providing loans with interest. Therefore, the financing activities become the key function of Islamic banks. All the financing operations are based on principle allowed by Shariah (Haron, S., and Shanmugam, B., 1997).

NPLs and NPF

The 90 days period is the most broadly used practice in other countries to define whether a loan or financing is non-performing. However, the description of NPL and NPF may contrast according to the types of underlying contracts.

As a general rule, impaired loans and credit facilities should be categorized in the following manner as shown in Table 1.

Table 1: Problem Loans Classifications

Period of Default	Classification
6 months* but less than 9 months	Substandard, unless there is verification to support a worse-off classification
9 months but less than 12 months	Doubtful, unless there is verification to support a worse-off classification
12 months and above	Bad

*3 months in the case of credit cards and trade financing instruments

Source: Bank Negara Malaysia (2005)

Bank specific determinants of NPLs

Previous studies have discovered information on variation in NPLs. Most of the studies found that the higher or larger the bank size the higher the probability of defaulting (such as Sheefeni, 2015; Gelette, 2012; Misra and Dhal, 2010; Delis and Papanikolaou, 2009; Khemraj and Pasha, 2009) .While other studies found a negative relation between bank size and NPLs. Their study argued that bigger size of the banks seems to have fewer loan defaults (Hu, Yang and Yung-Ho, 2006; Rajan and Dhal; 2003; Salas and Saurina, 2002). The negative sign of the bank size might be because of the less concentrated portfolio since bigger size of the banks allows for diversification opportunities. Thus, the results on the size of the banks are inconclusive discovered by the previous studies. Moreover, most of the previous studies were carried out based on the conventional banking system. That being so, this study will focused on Islamic and conventional banking system.

Most of the previous studies found that the capitalization is one of the factors that influencing NPLs. Numerous of the research has discovered that when the capitalization of the bank is decreasing, therefore NPLs is increasing. Hence, there is a negative relationship between capitalization and NPLs (Hasna Chaibi, 2016; Salas and Saurina, 2002; Berger and DeYoung, 1997). However, some studies shows the opposite findings which means that highly capitalized banks are likely to have high NPLs compared to their fellow with lower capitalization (Laryea, Ntow-Gyamfi and Alu, 2016; Agoraki, 2011; Boudriga, 2009). Meanwhile, the finding from Fajar and Umanto (2017) stated that there is no significance relationship between capitalization and NPLs and it is supported by the the study from Louzis (2012) and Khemraj and Pasha (2009). Most of the empirical study that has been done, the result were focusing on conventional banking system. Thus far, this study will emphasizes more on the effect of capitalization on NPLs focusing on Islamic and conventional banking system.

Many scholars hold the view that decreasing in measuring cost efficiency lead to an increase in future NPLs (Abid, Ouertani and Zouari, 2014; Belaid, 2014; Louzis, 2012; Podpiera and Weill, 2008; Berger and DeYoung, 1997; Kwan and Eisenbis, 1997; Peristiani, 1997). According to Anthanasoglou, Brissimis and Delis (2008) efficient cost managemnet is an important determinants of bank performance. Therefore, ineficient cost management may cause an increase in future NPLs. The cost efficiency usually measured by the ratio of total operating expenses to total income. So far the previous study mostly has focused on conventional banking system. The following study will discuss more on Islamic and conventional banking system.

Macroeconomics Determinants of NPLs

There is a large number of published studies on the association between GDP growth rate and NPLs. Several number of empirical studies have found that there is a negative relation between real GDP growth rate and NPLs (Mwega, 2011; Khemraj and Pasha, 2009; Jimenez and Saurina, 2006, Fofack, 2005, Salas and Saurina, 2002). They had mentioned that the higher positive level of real GDP growth typically requires a higher income. Therefore, the borrowers had their capacity to pay their debts. Consequently, it will reduced the possibility of the loan default. However, there is an inconsistency with this argument when Beck, Jakubik and Piloiu (2013) found that GDP growth rate have a positive significance effect to NPLs. This finding were supported by the previous studies that has been done by Thiagarajan, Ayyapan and Ramachandran (2011), Derbali (2011), Ali and Daly (2010). However,

most of the studies has been done on conventional banking system without considering Islamic banking system. Therefore, due to this following gaps, this study seeks to provide the empirical evidence for both banking system.

A number of authors have considered the effect of inflation rate on NPLs. Previous studies from Mileris (2012) stated that increases in inflation rate had a positive effect to NPLs which mean, when the inflation rate is increasing, NPLs also increase. This finding were supported by Badar and Javid (2013), Bonilla (2012), Moinescu and Codirlasu (2012), Kochetkov (2012), Derbali (2011), Greenidge and Grosvenor (2010). On the other study by Warue (2013), the findings shows that inflation rate was negatively related to NPLs. The study employs both pooled (unbalanced and fixed effeck panel methods to investigate the effect of inflation rate on NPLs. It was supported by the previous study from Khemraj and Pasha (2009) and Kasselaki and Tagkalakis (2014). Therefore, in this study is concern more about the effect of inflation rate towards NPLs for both banking system.

Numerous studies have been done on the unemployment rate as one of the determinants of NPLs. From Iuga and Lazea (2012), they found that increasing in unemployment rate will cause an increasing in NPLs. This findings were supported by Klein (2013), Donath, Cerna and Oprea (2014) and Mileris (2014). Therefore, it is confirms that unemployment rate are positively related with NPLs.

Implication of NPLs towads banking industry

Most of the banks were experienced high Non-Performing Loans (NPLs). The earliest empirical studies on non-performing loans by Keeton and Morris (1987) founds that there are various factors leading to loan loss of 2,500 banks in USA. This is supported by Ahmad and Arif (2007) who agree that most banks in Nigeria and other countries such as Thailand, Indonesia, Malaysia, Japan and Mexico were experienced high NPLs and significant increase in credit risk during financial and banking crises. These were resulting several banks in Indonesia and Thailand was closing down. Although no bank was closed down in Malaysia, but the weaker banks were required to merge with others to reinforce their capital base which was eroded by massive accumulated losses due to impairment of loans.

For most banks, loans are the largest source of credit risk. According to Basel (2000), credit risk could be described as the potential that a bank debtor or counterparty will fail to meet commitments in accordance with agreed terms. Since credit risk is a major cause to the performance of the banks, therefore credit risk management could be the preventions to the failure of the banks. A study conducted by Hamisu (2011), found that credit risk management has a significant influence on the profitability of Nigeria banks. Therefore, the management of the banks needs to be cautious in setting up a credit policy that might not negatively affects profitability of the banks.

Knowing that loans is the largest of bank assets, therefore failure to manage loans would likely lead to high non-performing loans (Musau, 2014). According to Warue (2013), non-performing loans are positively related with bank landing rates in commercial banks. Ekanayake and Azeez (2015) indicated that NPLs tends to increase with weakening banks efficiency. Etale, Ayunku and Etale (2016) added that high level of NPLs would reduce the performance of the banks in the long run.

Karim, Chan and Hassan (2010) investigate the relationship between NPLs and bank efficiency as well as bank performance. The findings shows that the higher NPLs will reduce the bank performace. The most significant variables in their study is cost efficiency which mean, the lower cost efficiency will give the higher NPLs and hence the lower bank performance. It is supported by David,

Nemwel and George (2014) and Chimkono and Njeru (2016), which the findings indicated that NPLs have negatively related to the bank performance.

CONCEPTUAL FRAMEWORK AND RESEARCH METHODOLOGY

The conceptual framework of research study is as shown in figure 2.

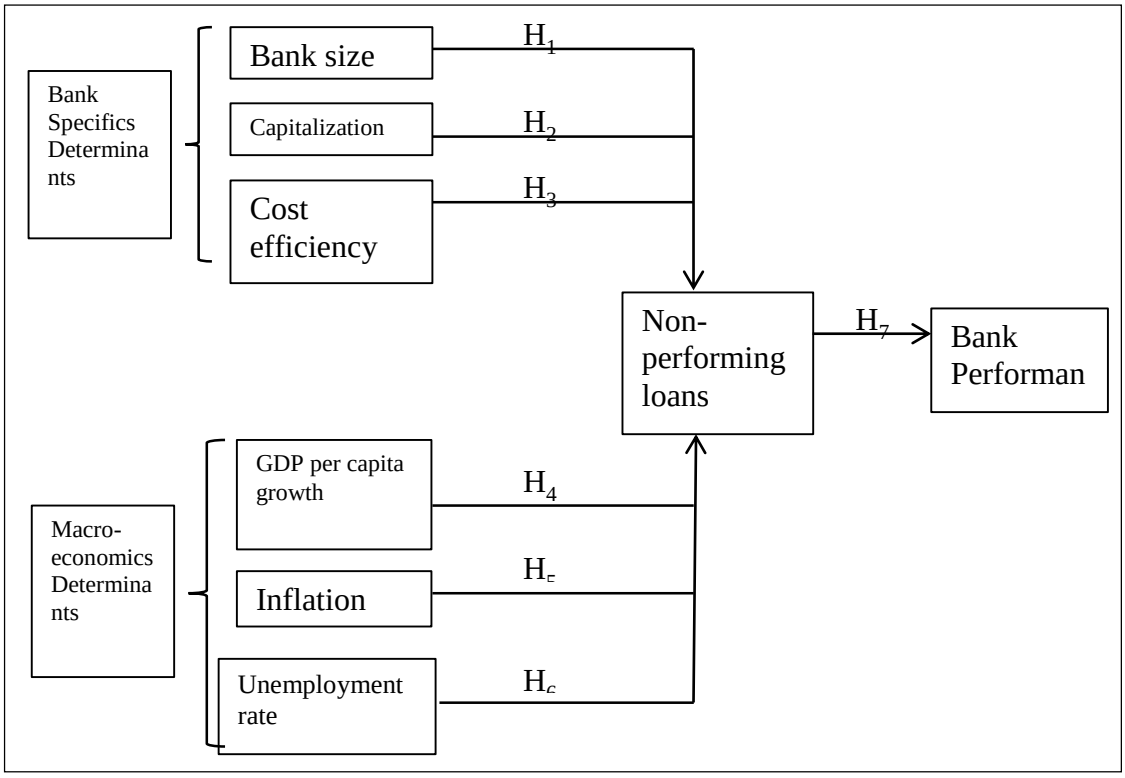

Figure 2: The Research Conceptual Framework

Dependent variable is the impact of the all the non-performing loans towards bank performance. Then independent variables are divided to two components, which are bank specific variables and macroeconomics for Islamic and conventional banking system.

Research Hypotheses

The study intended to see the relationship between the bank-specific and macroeconomics determinants towards NPL and hence the relationship between NPL and bank performance.

Frome the above conceptual framework, the following hypotheses were derived:

H1(a)/(b): Bank size has a significant effect towards non-performing loans specifically in Islamic banks/conventional banks

H2(a)/(b): Capitalization has a significant effect towards non-performing loans specifically in Islamic banks/conventional banks

H3(a)/(b): Cost efficiency has a significant effect towards non-performing loans specifically in Islamic banks/conventional banks

H4(a)/(b): GDP growth rate has a significant effect towards non-performing loans specifically in Islamic banks/conventional banks

H5(a)/(b): Inflation rate has a significant effect towards non-performing loans specifically in Islamic banks/conventional banks

H6(a)/(b): Unemployment rate has a significant positive effect towards non-performing loans specifically in Islamic banks/conventional banks

H7(a)/(b): NPLs has a significant negative effect on bank performance specifically in Islamic banks/conventional banks

Data Collection and sampling

The population frame in this study consists of conventional and Islamic banks in ASEAN countries. This study will covers from small, medium and large banks, whether purely operate as Islamic banks or conventional banks in the ASEAN countries. This study will employ judgment-sampling technique to select required sample of banks. This sampling design is chosen in order to make sure all subgroups have sufficient elements and differentiated information is needed regarding various strata within the population. The required banks will be Islamic and conventional banks from Malaysia, Indonesia, Singapore, Thailand, Brunei and Philippines. These six countries already contributed more than 60 percent on gross domestic product for ASEAN.

Data Analysis Method

In estimating the factors affecting NPLs as wells its implications toward performance, researcher will employ Fixed Effect regression since this model allows control for heterogeneity across banks. The general forms of the model can be specified a follows:

$$Y_{it} = \alpha + \beta X_{it} + \varepsilon_{it} \quad (1)$$

where the subscript *i* denotes the cross-sectional dimension and t represents the time-series dimension which is in year. Y_{it} represents the dependent variable, X_{it} denotes a set of independent variables in the model, α is a constant, βrepresents the coefficients and ε_{it} represents the random error term.

CONCLUSION

This is a conceptual framework on a study to investigate the implications of NPLs toward bank performance. The conceptual framework and research hypotheses have been developed based on the review of the literature related to the bank performance and non-performing loans. Bycollecting data from various ASEAN countries, researcher aimed to model NPLs in a few Asian countries and later do a comparison across the model. With this discussion, by looking at the most influencing determinants or variables toward NPLs, it will provides important insights for the government as well as banking industry to find alternative solutions to make sure the percentage of the NPLs can be reduced for the years ahead.

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