

**FOKUS MANAJERIAL** Jurnal Manajemen dan Kewirausahaan

Jurnal online: http://fokusmanajerial.org



# Credit Risk in Indonesia: Islamic Bank vs Conventional Bank

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Diterima (*Received*): 4 Februari 2015. Diterima dalam bentuk revisi (*Received in Revised Form*): 10 Maret 2015. Diterima untuk dipublikasikan (*Accepted*): 25 Maret 2015.

#### ABSTRACT

This paper examines the credit risk in Islamic Banks compared to Conventional Banks in Indonesia. The credit risks level in each Islamic banks and Conventional Banks are expressed in terms of financial ratios, Non-Performing Financing (NPF) in Islamic Banks and Non-Performing Loan (NPL) in Conventional Banks. The data sample used in this study are published financial statements for period of 2004 – 2013. To test the hypotheses the authors classified the data into three categories based on the size of total assets, category 1 for total assets range of 1 – 10 trillion Rupiah, category 2 for total assets range of 10-50 trillion Rupiah and category 3 for range of total assets of 50 -100 trillion Rupiah. The authors find significant differences of NPF and NPL value in every categories. Remarkably only in category 1 that NPF outperform NPL, it indicates that the credit risk in Islamic Banks are lower than in Conventional Banks. Meanwhile for category 2 and category 3 the value of NPF are higher than NPL, it indicates that the credit risk in Islamic banks in category 2 and category 3 due to greater total assets managed which are significantly will expose Islamic banks to greater credit risks.

*Keywords*: Credit Risk, Non Performing Financing, Non Performing Loan, Islamic Banking, Conventional Banking

Indonesia as the one of the most Moslem populous country, has been seen to have a progressive growth in Islamic banking and finance industry. There are more than 200 million Moslem people in Indonesia, which is seen as the potential demand for the existence of Islamic financial instituion. Despite its large demographic number, other factors also play important roles to contribute the growth in the Islamic banking and finance industry, such as; increasing demand for alternative banking products and services, dynamic banking regulatory platform, development of financial instrument in accordance with *Shari'a* law, more Islamic scholars, support from the regulator.

Indonesia is one of the country that applies dual banking system, both conventional and Islamic banking run their operations side by side. The application of dual banking system has urged regulator, in this case is the Central Bank; Bank Indonesia to facilitate the progressive development of Islamic financial market. Bank Indonesia has constructed an Islamic banking committee in 2008, this committee consists of representative from Bank Indonesia, Islamic banking and finance expertise and Islamic scholars from the Ministry of Religion. The National *Shari,a* Board has also set up to supervise the implementation of Islamic banking regulations closely.

The robust growth of this industry also followed by some challenges, such as; the small market share, the shortage of particular human resources with high-skilled for the Islamic banking and finance industry, the lack of product innovations in order to accomodate various transactions in the industry, lack of knowledge and unawareness of the people about Islamic banking industry and limited government regulations on the industry.

Islamic Bank nowadays transform globally from a term of a distinctive institutions for Moslem population to be a potentially fastgrowing bussiness model. Islamic Banking industry has been growing rapidly around the world for the last three decades with suggesting annual growth of 17,6% in 2013 and managing assets of approximately USD 1,72 trillion in 2013.

In Indonesia, the Islamic Bank sector has shown a rapid development by doubling the rate of growth than the Conventional Bank as the counterparts. According the data from Indonesian Sharia Banking Association (ASBISINDO), in 2013 there are 11 Islamic Commercial Bank (BUS), 23 Sharia Business Unit (UUS) and 160 Islamic Rural Bank (BPRS) and combined managing assets in total of USD 18,96 billion. Those numbers reflect the products of Islamic Banks are now evolve into the new term from their initial inception which their approach was aimed to attract Moslems clients emotionally by offering halal banking system for transactions. Nowadays, this industry offers and emphasizes wider functional financial benefits not just for Moslems but for other potential clients as a new promising business model with Sharia law compliance.

Widely known that in Islamic Bank system interest is not allowed and it transforms to profit – loss sharing (PLS) mechanism. In financing products, the system is fixed installment repayment plan without interests and penalties involved and also offers various schemes of partnership with PLS mechanism. In this stage Islamic Bank system exercising its social missions in upgrading the wellfareness of the clients as well as providing wider array of products available for all people that are potentially to be loyal clients regardless their religion backgrounds.

Islamic banking provides transparency in its banking system, in order to promote the *Shari'ah* way of life. Transparency could be define as the fair dealing and good maintain in relationship with customers. Basically, Islamic banking is expected to run their business and operation based on the *Shari'ah* law which is laid on the Islamic Law that God the Almighty owns everything and no man in this world allowed to mistreat that, instead they are only allowed to use and take benefits out of it to continue their wellfare of life.

Similar to conventional banks, Islamic banks are also faced with different types of risks such as credit risk. Some studies have found that Islamic banks are exposed to higher credit risks than conventional banks. It is said that because Islamic banks laid their credit agreement based on trust with their customers, sometimes it is mistreated by their customers to not repay the principal of the loan. The main characteristic of equity, risk and profit sharing in Islamic banks will be the best solution to avoid the mistreat of agreement, to diminish the unfairness of the dealing, to minimize the bad corporate governance and more importantly to ensure the welfare of the Islamic banks' customers.

Provided with all the uniqueness of the mechanism and phenomenal assets growth of Islamic banking, this facts will make Indonesia as a big potential growing and promising market. Islamic Bank industry has a lot to offer to address the clients' needs, especially in chanelling their assets for financing or funding products considering the large amount of assets in this industry. Regarding to the credit risk, Islamic Bank in some extend will provide a less risky financing product than in Conventional Bank.

#### THEORITICAL BACKGROUND

Islamic Bank is exposed to many types of risk; credit risks, liquidity risks, operational risks, interest risks, exchange rate risks, deposit withdrawal risks, political risks, etc. In terms of credit risk, it will be the most important risk in the case of relationship between bank and the owners of wealth. Islamic Bank will be exposed to credit risk when the debtors fail to oblige repay the loan at the repayment time and fail to fulfil the terms of conditions stipulated in the contracts. Therefore, Islamic Bank needs to manage the credit risk with a prudent policy in order to comply with the Sharia Law and the Indonesian Central Bank regulations.

Managing risks in Islamic banks should be handled deliberately, Islamic banks' characteristics are very unique and very much different from the conventional ones. The risk managers should be able to identify the type of risks, to measure the potential risks faced, to control the risks and to mitigate the risks in accordance with the *Shari'ah* law. Moreover, in the case of credit risks, to define clients (debtors) for the loan offered by the bank is necessary. Risk profiling in some institutions is very much well-known and used, the risk identification methods are usually applied for business clients.

In the very conservative Islamic banks, they usually do not offer financing products to personal clients (private individuals). These conservative Islamic banks provide credit facilities (loan) only to their long-term business clients whom are trustable. It is easier for them to manage the potential credit risk. One of the alternative used to mitigate the credit risks in Islamic banks is to define the product and the client.

In Islamic economics, risk is considered as a positive matter when it is related to the fairness concept in business. Fairness concept is a condition where each parties involved in a business agreement will enjoy profit and suffer loss according to their share in the business. In Islamic economics the concept of risk is known as Gharar and Maisir, in these concept the uncertainties are forbidden. Uncertainty in this concept means a phenomenon of "Asymetric Information". (Rivai & Ismal, 2013).

Gharar means uncertainty, risk or hazard in Arabic word. Unlike riba where the prohibition is absolute, but Gharar in some extent is acceptable unless in an excessive conditions it becomes strictly prohibited. Maisir means speculation or gambling in Arabic word and it is prohibited in Islamic economics, by definition it means to create wealth not by productive activity but by chances. (Kwan & Tan, 2010).

Type of Risks	Definitions
Credit Risk	Potential risk when clients fail to meet their obligations to repay the
	loan in accordance to the agreed term and condition.
Liquidity Risk	Potential risk that arises from bank inability to meet its short term
	obligation because it fails to convert assets to cash or suffer loss of
	capital in the process of conversion.
Market Risk	Potential risk that occurs because of the market price crusade.
<b>Operational Risk</b>	Potential risk that caused by the inadequacy of internal process in the
	company due to failed system or human resources.

Table 1: The Generic Risks of All Banks

Source: Asian Institute of Finance, 2013

Some previous studies has been conducted as a response as the Islamic banking shown a significant growth for the last decade. Comparative studies of financial performance of Islamic banking interest free against conventional banking interest based have previously done by Samad and Hassan in 2000, Rosly and Bakar in 2003, Samad in 2004, Mahmood in 2005, Widagdo and Ika in 2007, Kader et. al in 2007, Ika and Abdullah in 2011. The results of all studies surprisingly shown that there is no significant differences in terms of profitability and liquidity ratios between Islamic and conventional banking banking. Nevertheless, these studies reveal the existence of significant differences in the credit performance ratios.

Study conducted by Mahmood in 2005 found that Islamic banks in Pakistan outperformed almost in all ratios over conventional banks. Samad and Hassan in 2000 divulged that Islamic banks in Malaysia are statistically more liquid, more solvent and less risky compared to conventional banks by using the evaluation of financial ratios. Ika and Abdullah in 2011 measured comparatively financial performance between Islamic banks and conventional banks in Indonesia, concluded their findings that there is no major differences on the financial performances based on the measures of financial ratios between Islamic Banks and Conventional Banks in Indonesia. except for the liquidity ratios which is

represented by current ratio in this study which shows that Islamic Banks are more liquid than Conventional Banks.

The significant difference of the liquidity ratios in this study (Ika and Abdullah, 2011) due to the low consumption of sharia financing product in Indonesia Islamic Banks because the lack of trust from people of the capability of Islamic Banks to optimize the return of their money (welfare maximization) considering the interest free compliance and instability of economic conditions after global financial crisis hit.

Credit risks in Islamic Banks during that period were lower than in Conventional Bank in extend a very low consumption of sharia financing product shown by high liquidity ratios by that time.

The ratification of Indonesian Islamic banking regulations act number 21/2008 to strengthen and regulate the growth of Islamic finance market in Indonesia and the formation of the Indonesian Financial Services Authority (OJK) as a response to the global financial crisis in 2008, where this independent institution main functions is as regulators and supervisor of activities in financial sector in order to maintain the financial system stability are expected to affect the financial performance. Especially by the end of 2013, the central bank has delivered the authority of banking sector supervision to OJK. Given the fact above, it is expected that NPF in Islamic Banks will significantly outperform NPL in Conventional Banks in Indonesia. Based on this point of view, hypothesis are constructed as follows:

H<sub>1a</sub>: There is significant value difference between NPF of Islamic Bank and NPL of Conventional Bank in Indonesia for category 1 classification of total assets from 1-10 trillion Rupiah.

H<sub>1b</sub>: There is significant value difference between NPF of Islamic Bank and NPL of Conventional Bank in Indonesia for category 2 classification of total assets from 10-50 trillion Rupiah.

H<sub>1c</sub>: There is significant value difference between NPF of Islamic Bank and NPL of Conventional Bank in Indonesia for category 3 classification of total assets from 50-100 trillion Rupiah.

#### **RESEARCH DESIGN**

#### Population, Sample, and Sampling Method

The population in this research is bank listed in Bank Indonesia, The Central Bank of Indonesia from January 2004–2013. These banks are classified on Islamic bank and conventional bank.

The sample in this study is determined by purposive sampling method on the basis of certain criteria. Criteria in this study are: **1**) Banks that are listed in Bank Indonesia continuously from 2004 –2013. **2**) Banks published financial statement quarterly during the period of 2004–2013. **3**) Banks have a data set we needed.

We classified banks in three categories based on total assets. These categories are: 1) Banks with total assets 1-10 Trillions. 2) Banks with total assets 10-50 Trillions. 3) Banks with total assets 50-100 Trillions.

Based on these criteria we get 11 banks for Islamic bank and 26 for conventional bank. The sample in this study show in table below:

Table 2: Research Sample

	curenbumpie					
Category 1		Category 2		(	Category 3	
IB	CB	IB	CB	IB	CB	
MEGAS	Ganesha	BNIS	AGI	BMI	Bukopin	
BCAS	Saudara	BRIS	Ekonomi	BSM	Mega	
BJBS	ICB BP		ICBC Indo		UOB Indo	
PANINS	Mestika		Mayapada			
SBUKP	India Indo		Mutiara			
VICTS	Agroniaga		Resona			
MAYBS	Andara		Mizuho			
	Harda Int		ANZ			
	Kesj Ek					
	Multiarta					
	Pundi					
	Shbt Sampr					
	SHB					
	Chinatrust					
	Windu K					
Source: proc	essed data, 201	4				

#### Data Source

The data used in this analysis is secondary data financial statement quarterly that are obtained from the official website The Central Bank of Indonesia, www.bi.go.id. Set of data is obtained from 2004–2013. The data contains:

- 1. Islamic Bank and conventional bank list.
- 2. Total assets of banks in Islamic Bank and Conventional Bank for classifying their categories.
- 3. Bad debt, total Financing, and total loan for calculating NPF and NPL.

#### **Variables Measurement**

The NPF and NPL performance are measured by using the Loan to Deposit Ratio (LDR), in Islamic banking is known as inancing to Deposit Ratio (FDR). The low value of FDR and LDR indicates excess of liquidity, excess in liquidity reflects the type of financing in Islamic banks which is usually a short term financing. Short term financing required bank maintains high liquidity. The high value of FDR and LDR signifies the possibility of insolvency. Possibility of insolvency will represent the NPF and NPL performances in the banks, the value of insolvency reflects the failure of debtor to repay the loan or bank financing.

# **Hypothesis Testing**

We used independent sample test to find out the difference of NPF in Islamic bank and NPL in conventional bank. We use SPSS 17 for windows programme to calculate the difference.

# **RESULT AND DISCUSSIONS**

#### **Descriptive Analysis**

The main objective of this research is to compare the credit risk of Islamic Bank and Conventional Bank in Indonesia. First, we used descriptive analysis to describe data set characteristic. Based on calculate the date we have minimum value, maximum value, mean, and standard deviation each variable.

Table 3: Descriptive Analysis

Table 5. Descriptive rinarysis					
Variable	Ν	Min	Max	Mean	StDev
NPF-IC1	116	0.02	8.00	2.21	1.60
NPL-CB1	559	1.00	32.00	2.84	3.27
NPF-IC2	32	1.00	4.27	2.81	0.89
NPL-CB2	195	1.00	10.00	2.57	1.96
NPF-IC3	46	1.00	5.36	3.69	1.09
NPL-CB3	64	1.00	4.00	1.98	0.65

Source: processed data, 2014

Based on table 3 we know that variable NPF category 1 with N=116 have minimum value 0.02 and maximum value 8.00. While this variable have standard deviation 1.60 and mean 2.21.

- Variable NPL category 1 with N=559 have minimum value 1.00 and maximum value 32.00. While this variable have standard deviation 3.27 and mean 2.84.
- Variable NPF category 2 with N=32 have minimum value 1.00 and maximum value 4.27. While this variable have standard deviation 0.89 and mean 2.281.
- Variable NPL category 2 with N=195 have minimum value 1.00 and maximum value 10.00. While this variable have standard deviation 1.96 and mean 2.57.
- Variable NPF category 3 with N=46 have minimum value 1.00 and maximum value 5.36. While this variable have standard deviation 1.09 and mean 3.69.
- Variable NPL category 3 with N=64 have minimum value 1.00 and maximum value 4.00. While this variable have standard deviation 0.65 and mean 198.

# **Hypothesis Testing**

We used independent sample test to find out the difference of credit risk in Islamic bank and conventional bank. The credit risk is measured by NPF on Islamic banks and NPL on conventional banks. The calculation of independent samples test can be seen in table 3 below:

Table 4: Independent Samples Te	est

	t	Sig.t
Islamic Bank-Conventional	-3.081	0.011
Bank [Category 1]		
Islamic Bank-Conventional	1.133	0.007
Bank [Category 2]		
Islamic Bank-Conventional	9.477	0.000
Bank [Category 3]		
Source processed data 2014		

Source: processed data, 2014

Based on table 4 we know that t value between Islamic bank and conventional bank category 1 is -3.081 with a significance level 0,011. Significance value that less than 0.05 indicates that there is a difference credit risk between Islamic bank and conventional bank in category 1. It means that hypothesis 1a is supported. This result is in line with previous research conducted by Mahmood (2005) that said Islamic banks were superior to conventional banks almost in all financial ratios (evidence in Pakistan). Similar study conducted by Samad (2004) found that there is no significant difference between Islamic banks and conventional banks in respect of its profitability and liquidity. However, the study also found the existence of significant difference in credit performance. The average of NPF in category 1 is 2.21, it is lower than the average of NPL 2.84. The result of the average of NPF and NPL indicates that the credit risk in Sharia Bank is lower than the credit risk in Conventional Bank.

Based on table 4 we know that t value between Islamic bank and conventional bank category 2 is 1.133 with a significance level 0,007. Significance value that less than 0.05 indicates that there is a difference credit risk between Islamic bank and conventional bank in category 2. It means that hypothesis 1b is supported. However, this result is not in line with previous study mentioned above because despite the significant difference of the NPF and NPL value, the value of NPL in this category outperformed the NPF value. The average of NPF in category 2 is 2.81, it is higher than the average of NPL 2.57 in the same category. This result indicates that for category 2 the credit risk in Islamic bank is greater than in conventional bank.

Based on table 4 we know that t value between Islamic bank and conventional bank category 3 is 9.477 with a significance level 0,000. Significance value that less than 0.05 indicates that there is a difference credit risk between Islamic bank and conventional bank in category 3. It means that hypothesis 1c is supported. Neverthless, this result is not in line with earlier research mentioned before because in this category 3 NPL rate is lower than NPF rate. The average of NPF in category 3 is 3.69, this value is higher than the NPL in the same category of 1.98. This result indicates that in category 3 Islamic bank is exposed to greater credit risk than conventional bank.

Higher credit risk in Islamic bank due to greater risk of financing. Islamic bank attempt chanelling its financing product not only the margin-based financing product but also rise the percentage of profit share. The increase of profit share percentage in Islamic bank can be shown statistically from the rise of non-performing financing in 2013 for capital financing of 2.2 trillion Rupiah. Meanwhile, the non-performing investment and consumption financing are 1.01 trillion and 1.55 trillion Rupiah.

# Challenges in the Islamic Banking industry in Indonesia

Indonesia is one of the country which its economy is emerging, indicated by the growing demand of alternative banking products. bv huge Supported the number of demographics, create a potential market for Islamic banking and financial industry to continue growing. Nevertheless, this positive growth deals with numbers of barriers, such as; the lack of Islamic banking and financial instruments, the lack of products awareness, the shortage of government support.

Some studies shown that Indonesia Islamic banking and financial industry has been trapped in the 5% growth for the past few years. Despite all the barriers mentioned above, the regulators should provide profound regulatory platform in order to shield the activity and the growth of Islamic banking and financial industry in the country.

Another main issue to be considered is the proficiency of Islamic banks in risk management. All this years, Islamic banks replicate the risk management process from the meanwhile conventional ones, the characteristics of Islamic banks are very unique. Islamic banks should have the efficient risk management in accordance to Shari'a Law, so that it would give the ability to construct the appropriate risk assessment in the industry.

#### CONCLUSION

Based on the data analysis and previous explanation, it is concluded that credit risk in Islamic bank differs from credit risk in conventional bank. The result of analysis shown that for category of total assets 1 – 10 trillion Rupiah, conventional bank is exposed to greater credit risk than Islamic bank. Contradictively, different result shown in the category for total assets of 10 - 50 trillion Rupiah and category for total assets of 50 - 100 trillion Rupiah. There are significant differences for NPF and NPL value, but in these categories Islamic bank is highly exposed to greater credit risk than conventional bank. Islamic bank shoul be more prudent in chanelling financing product in order to avoid the non-performing financing in the future.

The data sample of this research was taken from published financial reports for period of 2004-2013. Therefore, this research only reflects the credit risk condition in Indonesia banking industry during that particular period. Future research can be developed by analysing longer period of data sample, which is expected to give wider perspective on credit risk in Indonesia bangking industry respectively. This research limitation is comparing only one variable to reflect credit risk, in the future more variables can be also involved as indicators to analyse the credit risk in Indonesia banking industry. Further research can be focused to reveal the determinant factors of credit risk in Islamic bank and conventional bank.

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