

## The Factors Influencing the Changes of Deposit in Islamic Bank: Comparative Study between Malaysia And Indonesia

Dr. Noraziah Che Arshad<sup>1</sup> & Dety Nurfadilah<sup>2</sup>

### Abstract

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This paper aims to investigate the factors influencing the changes of deposit in Islamic banks in the case of a comparative study between Malaysia and Indonesia. The focus of this paper is on the mudharabah deposits. For that purpose, a model is set up to estimate the changes of Islamic deposit. In line with this issue, we find that four variables are being considered: Non-performing financing, reserve, rate of return, and interest rate. The data were collected from 16 Islamic Banks in Malaysia and 11 Islamic Banks in Indonesia during the period 2010 – 2015. This study used panel data and generalised least square method. The findings show that conventional interest rates and non-performing financing for both countries have a negative relationship with the changes of Mudharabah deposits, while rate of return and bank reserve have a positive relationship and significant with the changes of Mudharabah deposits. To the best of the author's knowledge, this is the first attempt to empirically examine the differentiation of customer bank's behaviour towards Islamic deposit product in Malaysia and Indonesia.

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**Keywords** : Islamic deposit, non-performing financing, rate of return, interest rate, Mudharabah deposits.

### 1. Introduction

Nowadays, the popularity of Islamic banks have increased significantly among consumers. The growth of Islamic finance industry has expanded roughly at 10-12% annually (Abayomi and Zamir, 2015). The total asset for bank and non-bank financial institutions, capital market, money market, and takaful has achieved US\$2 trillion and the market size is expected to achieve \$3.4 Trillion by the end of 2018 (Naveed, 2014). Over the past decade, Islamic finance has become a choice as an effective financing tool in Majority Muslim country including in Non-Muslim country such as the UK, South Africa, Hongkong, and Luxembourg (Zamir and Abayomi, 2015). The total asset of Islamic banks in Malaysia is higher than Indonesia. According to OJK (2015), Malaysian Islamic banks have US\$ 423,285 Million in 2014, while Indonesian Islamic banks have US\$ 35,629 in 2014.

Islamic bank's major source fund is depositor's funds, similar with conventional banks. Depositor's funds can increase bank capacity for financing operations and profit for the shareholders. However, Islamic banks offer different principles with conventional banks. Conventional banks use interest, whereas Islamic banks should be accordance with Sharia law. It also should be based on amanah principle, promote more secure financial instrument which is free from riba, maysir and gharar.

Under the repealed Islamic Banking Act 1983 (IBA), all monies accepted from customers were classified as Islamic deposits, which comprise of both deposit and investment products. However, the Islamic Financial Services Act 2013 (IFSA) seeks to provide greater legal clarity on the application of the various types of shariah financial contracts and ensure end to end compliance in Islamic banking operations. Under IFSA 2013, Islamic banks are now required to segregate Islamic deposits with a principle guaranteed feature from investment accounts with a non-principle guaranteed features. This distinction should allow Malaysian Islamic banks to develop a wider range of products for both deposit and investment uses in order to meet the diverse needs of customers.

In order to facilitate smooth implementation of the reclassification process and ensure relevant stakeholders interests are protected, Bank Negara Malaysia has formulated a transition plan to allow Islamic banks to complete the process. In Indonesia, there are a few challenges faced by Islamic banks, such as low awareness and public understanding, unvaried products and services that do not meet public expectation, inadequate capital and low efficiency of individual banks, and high cost of fund that causes limited financing segment. Therefore, Otoritas Jasa Keuangan has launched the roadmap of Indonesian Islamic banking 2015 – 2019 which consist of 7 policy directions and 41 priority programs. The purposes of this roadmap is to Establish Islamic banking that provides significant contributions to sustainable economic growth, equitable development, financial system stability, and has high competitiveness. One of the priority program is to improve **the** funding structure and expand financing segment through **an** incentive framework for expansion of productive financing in infrastructure and corporate sectors.

In this regards, several studies have been conducted based on Indonesian and Malaysian context. Kasri and Kassim (2009) found that Islamic bank deposit in Indonesia is not influenced by interest rate, but rate of return. Haron and Azmi (2008) investigate the long run relationship between Islamic banking system in Malaysia and the amount of deposit. It found that Islamic bank depositors are influenced by both financial and economic variables. Saad and Mohammed (1998) said that consumers tend to choose **an** Islamic bank because of Islamic principle and rate of return. Cengiz and Radi (1989) stated that religious motives is not the dominant factors, but profit motivated.

This study empirically assesses whether the factors influencing the changes of deposit in Malaysian Islamic banks and Indonesian Islamic banks are similar or different. In particularly, we investigate the impact of interest rate, rate of return, income from investment of depositor's reserve, reserve and non-performing financing (NPF) ratio towards customer bank's behaviour. Actually, there are three categories of Islamic deposit such as Current account deposits under Al-Wadiah, Savings account deposits under Al-Wadiah and Investment account deposits under Al-Mudharabah that comprises general investment deposits and specific investment deposits, but this paper is only focuses on Mudharabah deposit. This study will be beneficial for practitioners to make a right decision about customer's deposit

This study is organised into seven **sections**. Section 1 present introduction, section 2 discuss performance of Islamic banking industry in Malaysia, section 3 discuss performance of Islamic banking industry in Indonesia, section 4 present literature review, section 5 illustrates Theoretical framework and hypothesis testing, section 6 provides **a** methodology, section 7 discuss empirical finding and discussion from statistical analysis, section 8 captures the conclusion and recommendation.

## 2. Performance of Islamic Banking Industry in Malaysia

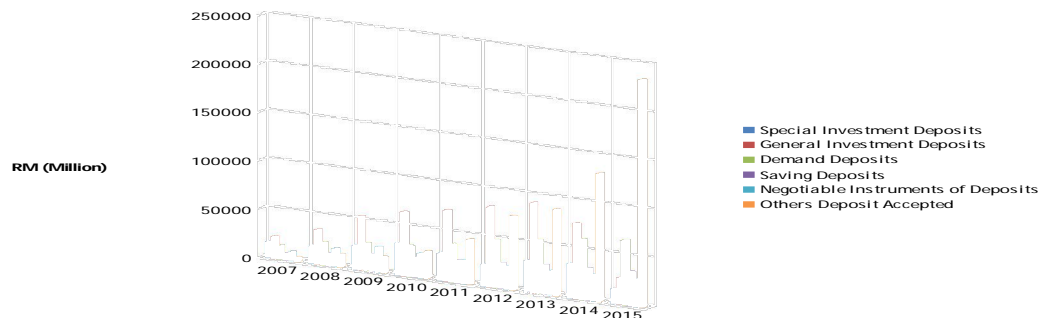
In Malaysia, Islamic finance has grown significantly since it first establishment in the 1970's. This industry has been existing for over 40 years. The enactment of Islamic Banking Act 1983 allows the country to establish the first Islamic bank with the liberalization of the Islamic financial system, then more Islamic financial institutions have been established. Today, Malaysia's Islamic banks have grown twice as its conventional counterpart at a compounded annual growth rate 22%. It can be seen from Table 1 that currently, Malaysia has a total number of 16 Islamic Banks and 3 International Islamic Banks. Between 2010 and 2014, Islamic banking assets in Malaysia **have** increasingly grown, with total assets reaching about RM 615,190.00 million at the end year 2014. Islamic banks in Malaysia have become more efficient in optimising balance sheet Returns and controlling expenses.

**Table 1: The development of Islamic banks in Malaysia (in RM million)**

Indicators	2010	2011	2012	2013	2014
Islamic banks (unit)	17	16	16	16	16
International Islamic banks (unit)	3	3	3	3	3
Total assets	351,195.0	434,665.5	494,705.2	558,295.0	615,190.0
Total capital	22,552.9	26,659.4	30,014.6	33,683.4	40,716.2
Total revenue	11,994.8	13,643.1	16,415.7	18,106.3	20,416.1

Source: Central Bank Malaysia, data up to 2014

Figure 1 found that Islamic bank in Malaysia offer different types of depository services such as demand account, savings accounts and the investment accounts. Demand accounts and savings account guarantee depositors the nominal value of the deposit, but provide no guarantee on returns. The investment accounts operate fully under the profit and loss sharing (PLS) scheme where capital is not guaranteed neither any pre-fixed returns.

**Figure 1: The Composition of Islamic Bank Deposits: Malaysia (2007 to 2015)**

Source: BNM (2015)

### 3. Performance of Islamic Banking Industry in Indonesia

Indonesia began to enter into the Islamic financial sector in 1992 which allow the establishment of Bank Muamalat Indonesia. Since then, Islamic banking sector has experienced rapid development. The average asset growth is 33.2% in the last five years and 47% in 2010. This is far above the global growth of Islamic banks in the range of 10-12% per years (Abayomi and Zamir, 2015). According to Otoritas Jasa Keuangan (2014), there are 12 Sharia Commercial Bank, 23 Sharia Business Unit (Conventional bank which open new windows in Islamic bank) and 163 Sharia Rural Bank (BPRS).

**Table 2: The development of Islamic banks in Indonesia**

Indicators	2011	2012	2013	2014	2015
Islamic commercial banks (unit)	11	11	11	12	12
Islamic business units (unit)	24	24	23	23	22
Total assets (in billion IDR)	148,987	149,321	306,230	272.343	296.262
Total Number of Offices (unit)	2,101	2,380	2526	2483	2301

Source: Bank Indonesia, data up to 2015

Lately, the total assets/liabilities have reached Rp1.8 billion. Total revenue has increased significantly for the past five years. In 2014, the total revenue has increased ten times than total revenue in 2010. In the case of a deposit, Islamic banks in Indonesia have applied three types of deposit such as demand, savings, and investment deposit. The majority of deposit contract use Mudharabah and Wadiah. The composition of these accounts is illustrated in table 3.

**Table 3: Depositor funds composition of Islamic commercial bank and Islamic business unit (In Billion IDR)**

No.	Deposit Funds		2010	2011	2012	2013	2014
1	iB Demand deposits - Wadiah	Amount	9,056	12,006	17,708	18,523	18,649
		Share	12%	10%	12%	10%	9%
	iB Saving deposits	Amount	22,908	32,602	45,072	57,200	63,581
		Share	30%	28%	31%	31%	29%
	a. Wadiah		3,338	5,394	7,449	1,074	12,561
	b. Mudharabah		1,957	27,208	37,623	46,459	5,102
	iB Investment deposit	Amount	44,072	70,806	84,732	107,812	135,629
		Share	58%	61%	57%	59%	62%
	a. Wadiah		3,338	5,394	7,449	10,740	12,561
	b. Mudharabah		19,570	27,208	37,623	46,459	51,020
	<b>Total</b>		<b>76,036</b>	<b>115,414</b>	<b>147,512</b>	<b>183,535</b>	<b>217,859</b>

Source: Otoritas Jasa Keuangan, data statistic (2014)

Based on the above table, the total deposit funds have increased significantly from 2010 to 2014. Investment deposit has the biggest share (approximately 60%) of total deposit fund collected by Islamic bank in Indonesia.

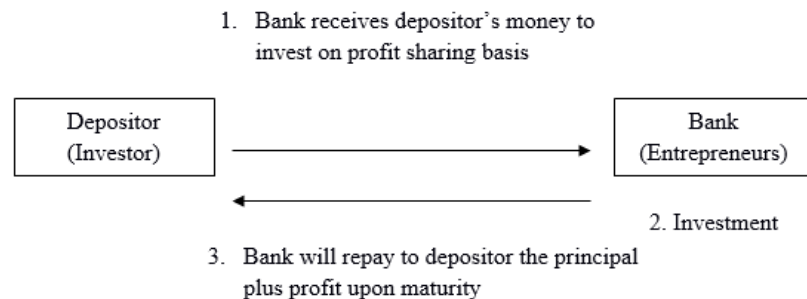
Mudharabah has the highest volume than wadiah in investment deposit. Whereas, demand deposit wadiah has the smaller share compare with others type of deposit (approximately 10%).

## 4. Literature Review

### 4.1 The concept of Mudharabah Deposit

Mudharabah has known as partnership contract between the customer as the owner of funds (shahibul maal) and the bank as the fund manager (mudharib) to conduct a certain project with a predetermined ratio of profit (nisbah). In the terms of deposits, mudharabah contracts known as investment deposit that may only be withdrawn within a certain period to get the investment returns (Wibowo and Widodo, 2005:46). Cahyadi (2006: 33) added that depositors invest their money on Islamic bank and may only be withdrawn on the due date of deposits.

**Figure 2. The Mechanism of Mudharabah Deposit**



There are several function of Mudharabah deposits. According to Perbawa (2013), the function of mudharabah deposits from bank's perspective means a financing source that can be used to finance the activities of other bank. The other function from customer's perspective means they can get rate of return based on profit sharing agreement. From the government's perspective, Mudharabah deposits at the bank are able to raise the inflation rate by reducing the amount of money circulating in the community and as financing for national development.

### 4.2 The Effect of Interest Rate on the Changes of Mudharabah Deposits

Interest rate is the amount of consideration given by the bank to the customer on funds deposited in the bank which are calculated as a certain percentage of the principal deposits and term deposits or the interest rate charged on bank loans to debtors (bank interest). Interest rates are considered as an important factor that determines the behavior of people to save money. According Wibisono (2010), Bank Indonesia interest rate can be interpreted as a policy rate that reflects the attitude or stance of monetary policy set by Bank Indonesia and announced to the public. The interest rate on Bank Indonesia is a reference for other banks to determine the interest rate. Pratasari (2010) also mentioned that their asset demand theory (theory of asset demand) underlying the negative relationship between interest rates and Islamic bank's product. The higher the interest rate, people will increasingly want to save. The lower the interest rate, people will tend not to invest in conventional banks but in Islamic banks.

Previous research conducted by Kasri and Kassim (2009) found that there is negative effect between interest rate of conventional bank and savings in Islamic banks. Islamic bank deposit increases with an increase in rate of return and decrease in interest rate.

As the rate of return of Islamic banks decreases below the interest rate of the conventional bank, the depositors of the Islamic banks transfer their deposits from the Islamic banks to the conventional banks. Their results reveal the significance of the interest rate in influencing the saving behaviour of customers to save in Islamic banks. Another study conducted by Haron and Azmi (2008) found that interest rate has a negative relationship with deposit in Islamic bank, but it has positive relationship with deposit in Conventional bank. Haron and Norafifah (2000) also found that interest rates of conventional banks are negatively related to Islamic bank deposit. Haron and Norafifah, (2000) found the outcome of interest rate on conventional bank deposit and the effect of past dividend rates on Islamic bank deposit in Malaysia. They reported that interest rates of conventional banks are negatively related to Islamic bank deposit. Moreover, it is noted that the utility maximization theory exists within the Muslim customers, is proved by the inverse association between conventional bank interest rate and Islamic banks interest-free deposit.

### 4.3 The Effect of Rate of Return to the Depositor on the Changes of Mudharabah Deposits

Previous research has investigated the impact of rate of return to Islamic banks deposits. According to Kasri and Kassim (2009), there is a positive relationship between rate of return and Islamic bank deposit. When the rate of return increase and interest rate decrease, the Islamic bank deposit will increase. Other research conducted by Rachmawati and Syamsulhakim (2004) also investigated four variables that influence mudharabah deposits in Indonesia such as economic growth, number of Islamic bank branches, rate of return an interest rate. The research found that religious belief has a positive relationship. Furthermore, rate of return also has a positive relationship with customer's attitude to choose deposit in Islamic bank. Haron and Planisek (1994) also found that religion and profit has a positive relationship with the reason of Malaysian customers to choose deposit in Islamic banks. This implies the existence of profit motive among the Islamic bank's depositors.

The other research conducted by Metawa and Almossawi (1998) found that Bahrain as the country with major Muslim population consider religious belief as the key variable to choose deposit in Islamic bank, but rate of return is not the only reason which determines the level of deposit.

#### **4.4 The Effect of Reserve on the Changes of Mudharabah Deposits**

According to Rifki (2013), when customers put their **savings** in a bank, bank may collect the funds as use the funds to cater a sufficient liquidity reserve and the remaining funds may be distributed for other business to generate income. He added that only 80% of the depositor's funds will be invested. The remaining funds can be used when the financing situation go down.

The depositor's fund from investment account must not be invested separately with current account depositors or/and shareholders' funds. The income generated from the investment of depositor's funds will increase the profit due to shareholders. The amount of profit sharing will be based on bank's policy. Bank can transfer parts of the income from the current account funds to the profits to be shared with the Islamic depositors. This allows a return on Islamic deposits which is above the level which would be possible if only the income from the investment of the Islamic deposits without a reduction of the profit equalization reserve.

Percentage revenue sharing has negative relationship with liquidity reserves. If Islamic banks generate more income and offer a better rate of return than conventional banks, depositors will deposit their funds in Islamic banks. Both more funds managed by Islamic banks leading to more prospective incomes, and a higher level of depositors' trust in dealing with Islamic banks might lower the liquidity reserves. In the other hand, if Islamic banks generate less income and share small rate of return than conventional bank, Islamic bank should have higher liquidity reserve as back-up funds to anticipate liquidity withdrawal from return-oriented customers. Normally, this kind of depositors have Islamic bank and conventional bank accounts and they can switch to the one that pays higher return.

#### **4.5 The Effect of Non Performing Financing (NPF) on the Changes of Mudharabah Deposits**

According to Agung and Badingatus (2016), Non Performing Financing (NPF) ratio is used to determine the financing problem. In the other meaning, NPF ratio measures the risk which associated with financing. Non Performing Financing that is used in Islamic bank have the same interpretation with Non-Performing Loan in Conventional bank. According to Sutojo (1997:24), there is a relationship between the NPF ratios with the customer's intention to save their money in a bank.

When a bank face a small **ratio**, it indicates the bank has a good performance. People are willing to put their savings in Islamic banks. In the other hand, if a bank face the decline in credit quality, there will be a decline in people's desire to put their savings. It will affect the financial liquidity and solvency, as well as the trust of funds depositors.

The non-performing financing (NPF) ratio in Malaysian Islamic banks is falling below their conventional counterparts, whereas Indonesian Islamic bank has surpassed the non-performing loans in their conventional banks (Damodaran, 2016). In Indonesia, Central bank has set a regulation that NPF in Islamic bank should be lower than 5% (Bank Indonesia Regulation).

### **5. Theoretical Framework and Hypothesis Testing**

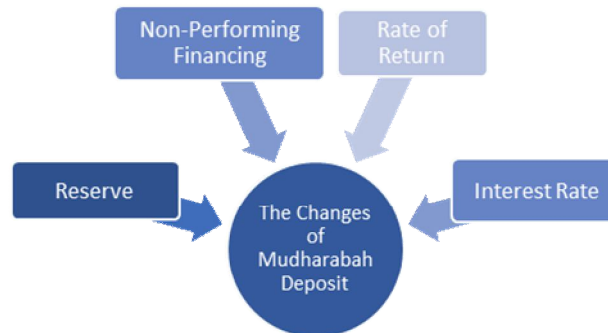
H1: Interest rate has negative relationship with the changes of Mudharabah deposit in Islamic bank.

H2: Rate of return has positive relationship with the changes of Mudharabah deposit in Islamic bank.

H3: Reserve has positive relationship with the changes of Mudharabah deposit in Islamic bank.

H4: Non-performing financing has positive relationship with the changes of Mudharabah deposit in Islamic bank.

**Figure 3: Theoretical framework.**



## 6. Methodology

### 6.1 Data and Sources

A number of variables are used and the data that include covered a period from 2010 to 2014 and consist of 16 Islamic banks in Malaysia and 11 Islamic banks in Indonesia. Data of these variables taken from annual report banks. Panel regression techniques are used to analyse the determinant factors of mudharabah deposit changes. Panel data is used because of many reasons as it has the edge of providing more informative facts as it entails of both the cross sectional material, that detentions individual changeability, and the time series material, that captures forceful modification. In short, panel modelling supports to identity a mutual group of features while, at the equivalent time, taking the account of the heterogeneity which is present between specific units.

### 6.2 Equation model

$$MD_{it} = \beta_{0i} + \beta_1 R_{it} + \beta_2 NPF_{it} + \beta_3 RR_{it} + \beta_4 IR_{it} + \mu_{it}$$

Where;

MD = is mudharabah deposits

R = is bank reserve

NPF = is non-performing financing

RR = is Islamic rate of return

IR = is conventional interest rates

## 7. Empirical Result

This section discusses the result of the influence of reserve, non-performing financing, rate of return, and interest rate on the changes of Mudharabah deposit in Indonesia and Malaysia. The data used in this study to form a regression on panel data, which combines time series and cross section. The time used in this study is 60 periods, example from January 2010 to December 2014, While, the data cross-sectional consist of eleven (11) Indonesian Islamic Banks, namely Bank Muamalat Indonesia (BMI), Bank Syariah Mandiri (BSM), and Bank Syariah Mega Indonesia (BSMI), Bank Syariah BRI, Bank Syariah Bukopin, Bank Panin Syariah, Bank Victoria Syariah, BCA Syariah, Bank Jabar dan Banten Syariah, Bank Syariah BNI, Maybank Indonesia Syariah. Whereas Malaysian Islamic banks consist of sixteen (16) banks, such as Affin Islamic Bank, Al Rajhi Banking & Investment Corporation (Malaysia), Alliance Islamic Bank Malaysia, AmIslamic Bank, Asian Finance Bank, Bank Islam Malaysia, Bank Muamalat Malaysia, CIMB Islamic Bank, Hong Leong Islamic Bank, HSBC Amanah Malaysia, Kuwait Finance House (Malaysia), Malayan Islamic Banking, OCBC Al Amin Bank, Public Islamic Bank, RHB Islamic Bank, Standard Chartered Saadiq. Statistical calculations in this research study assisted by using the software Eviews 7.1.

### 7.1 Descriptive Result in Malaysia

We begin our study with the presentation of various descriptive statistics and specification tests on our Malaysian banks sample. Descriptive statistics are used to describe the basic feature of the data in a study. It provides simple summary about the sample and the measures. Therefore these are shown as follows in Table 4 below.

**Table 4: Descriptive Statistic (Malaysia)**

	Mean	Median	Std. Dev.	Skewness	Kurtosis	Jarque-Bera
<b>MD</b>	5.4372	5.3431	0.9516	0.4193	2.8497	2.4190*
<b>R</b>	5.9294	5.7853	0.6034	1.6021	5.5801	56.4124*
<b>NPF</b>	5.3626	5.3536	0.7673	1.1430	5.4009	36.6352**
<b>RR</b>	3.0920	2.9900	0.1570	0.3997	1.2954	11.8150**
<b>IR</b>	2.9850	3.1500	0.4062	-1.4715	3.2119	29.0186*

Note: \* Significant at 1% , \*\* 5% and \*\*\* 10%

Mean is the sum of all the observation data divided by the number of observation. Table 4 show, the highest average is R which indicated by 5.93. It means that, reserve factor give significantly affect with mudharabah deposits. However, the lowest mean value is 2.99 belong to interest rate. Then, standard deviation is used in determining the variation of the data. MD variables have the highest standard deviation value of 0.95. This shows that the amount of mudharabah deposits in Islamic banks are not consistent. Small data dispersion exists for the rate of return variable. In measuring skewness, it is found that only IR variable have a negative scattering data. In contrast, mudharabah deposit, bank reserve, non-performing financing, and Islamic rate of return were positively scattered. Next, kurtosis tests were carried out to observe the normality of the data distribution. Only mudharabah deposits kurtosis' values are approaching three, meeting the criteria for a normally distributed data. To detect the normality of the data, it can be done by looking at the Jarque-Bera coefficient and probability. If the value of Jarque-Bera was not significant (less than two), then the data are normally distributed. In above table, we can see that the Jarque-Bera exceeds 2, then the data were not normally distributed.

**Table 5: Descriptive Statistic (Indonesia)**

	Mean	Median	Std. Dev.	Skewness	Kurtosis	Jarque-Bera
<b>MD</b>	6.5957	6.6276	1.3765	-1.7147	11.2502	182.9370*
<b>R</b>	3.9256	3.9617	1.0862	-0.6647	4.2719	7.7577*
<b>NPF</b>	2.6014	2.5000	1.6914	0.4501	2.7639	1.9853**
<b>RR</b>	5.1720	5.3800	0.5565	-0.2108	1.4881	5.6454*
<b>IR</b>	6.6780	6.5000	0.4503	1.2386	2.9641	14.0665*

Note: \* Significant at 1% , \*\* 5% and \*\*\* 10%

Based on the above table, the highest average is IR which indicated by 6.6780. It means that interest rate factor give significantly effect on mudharabah deposits. However, the lowest mean value is 2.6014 belong to NPF. Then, NPF variables have the highest standard deviation value of 1.6914. This shows that the amount of non-performing financing in Islamic banks are not consistent. Small data dispersion exists for the interest rate variable. In measuring skewness, it is found that mudharabah deposit, reserve, and rate of return variables have negative scattering data. In contrast, non-performing financing and interest rate were positively scattered. Next, kurtosis tests were carried out to observe the normality of the data distribution. Only non-performing financing and interest rate kurtosis' values are approaching three, meeting the criteria for a normally distributed data. To detect the normality of the data, it can be done by looking at the Jarque-Bera coefficient and probability. If the value of Jarque-Bera was not significant (less than two), then the data are normally distributed. In above table, we can see that the Jarque-Bera exceeds 2, except non-performing financing, then the data were not normally distributed.

**Table 6: Correlation Matrix (Malaysia).**

	MD	R	NPF	RR	IR
MD	1.0000				
R	0.5651	1.0000			
NPF	-0.5262*	0.7614***	1.0000		
RR	0.0386**	0.0160*	0.0225*	1.0000	
IR	-0.0348**	0.0562**	0.0015	-0.5342	1.0000

Note: \* Significant at 1%, \*\* 5% and \*\*\* 10%.

Table 6 empirically studied the correlation between the variables. It is used to measure the degree of strength (absolute value) of the relationship between the dependent and independent variables. Correlation analysis can also be used to determine the type of relationship or the direction of the figure, whether it is moving from left to right or vice versa.

Based on the correlation table 6, it seems that all independent variables have significant correlation with mudharabah deposits except the bank reserve variable. IR have significantly strong negative values with mudharabah deposits, which means that a one percent increase in the interest rate of the conventional banks would reduce the level of mudharabah deposits in the Islamic banks. These findings comply with El-Galfy and Khiyar (2012), Zarrouk (2012) and Muhammad (2013), who indicate that shock in interest rate of conventional bank negatively affects the number of deposits in the Islamic bank. Consequently, Islamic banks need to improve their return in order to compete with the conventional banks.

**Table 7: Correlation Matrix (Indonesia)**

	MD	R	NPF	RR	IR
MD	1.0000				
R	0.2260	1.0000			
NPF	-0.0605**	0.4143	1.0000		
RR	0.1473*	0.1382	0.0108**	1.0000	
IR	-0.1303***	0.0873**	0.3109	0.317	1.0000

Note: \* Significant at 1%, \*\* 5% and \*\*\* 10%.

Based on the correlation table 7, it seems that all independent variables have significant correlation with mudharabah deposit except bank reserve variable. IR has significantly negative values with mudharabah deposits. We can conclude that factors that influence the changes of mudharabah deposit in Indonesian Islamic banks are similar with Islamic banks in Malaysia.

The model estimation follows the standard panel data procedure. The models were estimated using Generalized Least Square (GLS) with pooled effect, fixed effect model and random effect model. The estimation results are presented in Table 8. For interpretation purposes, several diagnostic tests were performed to identify the preferred specification. Then the results were interpreted following the preferred specification.

The approach to test the efficiency of the random effect estimates, the Hausman test is performed. Chi-Square statistics, are found to be significant, so the hypothesis that mudharabah deposits effects are uncorrelated with the regressors is rejected at 5 per cent level of significance. This implies that the random effect estimates are unreliable, and the mudharabah deposits effects have to be treated as fixed.



**Table 8: Estimation results of generalized least squares (GLS) Model**

Variable	Malaysia		Indonesia	
	Fixed Effect Model	Effect Model	Fixed Effect Model	Effect Model
C	1.5191 (2.6678)		2.3709 (3.0343)*	
R	0.6208 (0.2287)*		0.2973 (0.1925)**	
NPF	-0.2826 (0.1793)*		-0.0573 (0.1293)*	
RR	0.3684 (0.6718)**		0.2030 (0.3620)*	
IR	-0.0469 (0.2605)*		-0.3229 (0.4661)*	
R-squared	0.3440		0.0746	
Adjusted R-squared	0.3090		0.0006	
Durbin-Watson stat	0.2914		0.4657	
F-statistic	9.8355		1.0082	
Prob(F-statistic)	0.0000		0.4121	
Hausman Specification Test	17.42		6.29	
Prob	0.0000		0.0000	

Note:

\*\*\* Significant at 1 percent level,

\*\* Significant at 5 percent levels,

\* Significant at 10 percent levels

Figures in parentheses are t-statistics

Based on table 8, Bank reserves has positive and significant relationship with mudharabah deposit in Indonesia and Malaysia. The results showed an increase of one per cent reserve level, which led to Islamic banking to increase level of deposits by 0.1925 in Indonesia and 0.2287 in Malaysia. Therefore, we accept H3 that Reserve has positive relationship with the changes of Mudharabah deposit in Islamic bank. This finding suggests that if bank reserves fall below the reserve requirements, the Islamic banking system must reduce its holdings of mudharabah deposits. In addition, the changes of mudharabah deposit is influenced by rate of return. From the estimation result, a 1% increase in rate of return would increase the volume of mudharabah deposits in Islamic bank in Indonesia by 0.3620 and Islamic bank in Malaysia by 0.6718. The positive relationship implies that religious belief is not the only reason for Muslim consumers to choose mudharabah deposit. They are also seeking a profit or return on their investment. This finding is in line with the study by Rachmawarti and Syamsulhakim (2004) that the increase of 1 per cent in profit sharing rate, it would increase the number of mudharabah deposit by 39,917.48 million rupiah. It indicated that depositors are also seeking welfare maximisation. Therefore, we accept H2 that Rate of return has positive relationship with the changes of deposit in Islamic bank.

On the other hand, we accept H1 that IR has negative relationship with mudharabah deposits for both countries. The results showed an increase of one per cent interest rate level, which led to Islamic banking to reduce level of deposits by 0.0469 for Malaysia and 0.3229 for Indonesia. It implies that Islamic bank deposit increases with an increase in rate of return and decrease in interest rate. This **finding** supported by Kasri and Kassim (2009), Haron and Azmi (2008), and Haron and Norafifah (2000).

In addition, we reject H4 because NPF has a negative relationship with mudharabah deposits in Malaysia and Indonesia. The result showed an increase of one per cent in non-performing financing, which led to Islamic bank to reduce level of deposits by 0.2826 for Malaysia and 0.0573 for Indonesia. The negative relationship implies that the problem in Islamic banks is increasing. The higher the value of NPF, the less healthy the performance of that bank.

## 8. Conclusion and Recommendation

This paper has attempted to investigate the influence of reserve, non-performing financing, interest rate, and rate of return on the changes of mudharabah deposit in Malaysian and Indonesian Islamic Banks. From the estimation, both countries agree that the independent variable conventional interest rate (IR) and non-performing financing (NPF) has negative relationship on the changes of mudharabah deposit. The other independent variables such as reserve (R) and Islamic rate of return (RR) have a positive and significant relationship toward mudharabah deposit in Malaysian Islamic banks and Indonesian Islamic banks.

In order to overcome the challenge, Islamic banks should put more competitive rate of return than conventional banks, and ensure that banks reserves meet the central **banks'** requirements.

Hopefully this study can be beneficial for practitioners to analyse the current strategy and help them to make right decision. This study also can fill the gap between literature reviews about mudharabah depositors and the real life experience. In addition, we hope that it will be helpful for academicians and student to understand more clearly about the changes of mudharabah deposit in financial industry.

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