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# The impact ringgit fluctuation towards profitability of islamic banks in Malaysia

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#### Abstract

Profitability of a bank is mostly relying on its financial performance as the ability to leverage operational, investment decisions and strategies to achieve a business' financial constancy. This study is devoted to examine the selected Malaysian Ringgit factors that bring impact to the bank's profitability of local Islamic banks in Malaysia. The findings show three independent variables gives positive significant relationship. For that purposes, policymakers should focus on these three variables for standardizing the economic environment to all local Islamic banks that operates in this country.

**Keywords:** Bank's profitability, debt to equity ratio, capital adequacy, exchange rate, interest rate.

## El impacto de la fluctuación del ringgit de la rentabilidad de los bancos islámicos en Malasia

#### Resumen

La rentabilidad de un banco se basa principalmente en su desempeño financiero como la capacidad de aprovechar las decisiones y estrategias operativas, de inversión para lograr la constancia financiera de un negocio. Este estudio está dedicado a examinar los factores seleccionados del Ringgit de Malasia que afectan la rentabilidad del banco de los bancos islámicos locales en Malasia. Los resultados muestran que tres variables independientes dan una relación positiva significativa. Para ello, los responsables de la formulación de políticas deben centrarse en estas tres variables para estandarizar el entorno económico para todos los bancos islámicos locales que operan en este país.

**Palabras clave:** rentabilidad del banco; ratio deuda / capital, suficiencia de capital, tipo de cambio, tasa de interés.

## 1. INTRODUCTION

Malaysia is well-known as a highly progressive and attractive Islamic financial sector in the world as it has grown substantially by demonstrating a high level of profitability and is less affected by the global economic downturn (Muhamad & Yameen 2013). Islamic financial system is aimed to create an environment where Muslim could involve in financial and banking activities without any uncertainty that against the religious (Parviz, 2009). In Malaysia, the Islamic banking system was fully established with the Enactment of Islamic Banking Act 1983. Aligned with that, Bank Islam Malaysia Berhad was set up and regulated by Bank Negara Malaysia under the Islamic Banking Act 1983 as the first Malaysian Islamic bank. Other than that, commercial banks, merchant banks and finance companies are also allowed to offer such Islamic banking product and services under the Islamic Banking Scheme. Currently, there are over 300 Islamic financial institutions across 75 countries around the world.

In different international currency markets and volatile exchange rates, most international trades are operated by major foreign currencies such as US Dollar, Japanese Yen, and others. In Malaysia, Bank Negara Malaysia is the sole authority in issuing the national currency known as Ringgit Malaysia which was officially published in 1967. However, when the Asian financial crisis took place in 1997, the Malaysian Ringgit was a victim in which both the pre-crisis and crisis periods have led to volatile stock prices and ringgit exchange rates over the years (Zubair, 2002). Due to this tragedy, Bank Negara Malaysia decided to set the ringgit value at RM3.80 against the US dollar. After the crisis, Ringgit Malaysia was pegged to almost seven years before it started to lower its value to RM4.0025 against the lowest dollar in 17 years. Therefore, this study aims to assess the impact of Ringgit Malaysia's fluctuations on the profits of local Islamic banks in Malaysia by measuring its debt to equity, capital adequacy, exchange rate (RM / US dollar) and interest rates. Measuring the profitability in terms of return on assets (ROA) is done by using banks specific variables.

## 2. BACKGROUND

Previous studies conducted by Hassan and Bashir (2003) discussed Return on Assets (ROA) and Return on Equity (ROE) as the overall performance measures of Islamic banking. They point out that asset returns can reflect the management's ability to use bank financial and investment resources to generate profits. Another study was also obtained from Elizabeth (2015) which examines the positive impact of currency fluctuations on financial performance of commercial banks in Kenya by using asset returns as dependent variables. Debt to equity ratio is used to analyze the financial position of the bank, thus affecting the performance of the bank. Leong, Liew, Mah, Tan and Yew (2013) find that the debt equity ratio has a significant relationship with the profitability of the bank. On debt to equity results, it was agreed upon by a study from Husni (2011) which has shown a significant positive and significant relationship between profit and debt to the equity ratio. Meanwhile, the results of the study conducted by Yogendrajah and Thanabalasingam (2011) are contrary as profit margins and debt to equity are positive but not insignificant.

The capital adequacy ratio is a valuable tool for assessing the security and soundness of the bank. Some researchers point out that when a bank with a high capital ratio or more equity capital indicates more bank security and is the advantage of gaining higher profits (Vong and Chan. 2009). A study on the effects of foreign exchange fluctuations and commercial bank profits in Nigeria was done by Amenawo, Hodo and Emmanuel (2016). This study focuses on the relative impact on bank profits by using four features of the bank as an independent variable comprising bank size, bank divestment, non-performing loans and capital adequacy ratios. Ahmad (2017) also found that the results of the study show that the capital ratio, other operating income, GDP for each capital, bank size and concentration and oil prices have affected the Islamic bank positively. In most research conducted for commercial banks also leads to positive positive relationships with asset returns, indicating that the increase in bank capital adequacy will lead to an increase in return on assets (Stephen et al., 2014 Pasiouras & Kosmidou 2007). In the previous study, the exchange rate as a determinant of Islamic bank capability has had a significant impact on its performance compared to conventional banking systems. Given the currency market to determine the exchange rate, there are some transactions that take place in conventional markets that are not suitable for Islamic trading systems which include swap, futures, options and forward contracts. The profitability of Islamic banks is not directly affected by the exchange rate but variations in the prices of the goods cause and affect the business efficiency and profitability.

Yang and Zeng (2014) defines as "the exchange rate measures the relative price of non-tradable goods in terms of tradable goods". In a study conducted by Nahar and Sarker (2016) states that exchange rates negatively affect the ability of Islamic bank financing. It is also supported by Elizabeth (2015) resulting in a negative correlation exists between exchange rate fluctuation and the profitability measured by asset ratio returns. The negative outcomes also showed inconsistence with a study conducted by Javaid and Alalawi (2017) which revealed that the exchange rate along with other macroeconomic variables is significant in determining the profitability of Saudi Arabian banks. However, a study by Iriani and Yuliadi (2015) contradicts the findings and found that the impact of macrovariables on non-performance financing of Islamic banks in Indonesia which showed that exchange rate had a positive impact the nonperforming financing. Likewise, Habib and Islam (2017) also found that Islamic banks stock market significantly influences due to interest and exchange rate in India. It is also supported by Carolyn and Daniel (2016) in where exchange rate fluctuations have a strong positively and significantly affecting the bank's performance in Nigeria. Further research results agree with the findings that exchange rates have a positive significant effect towards the return on assets

#### 3. METHODOLOGY

High inflation rates are generally linked to high interest rates on loans, and therefore higher revenues. When interest rates increase, deposits are more attractive while investments are less, and bank pays more to their saving accounts. On the other hand, high interest rates will impede borrowings as consumers will have to pay a high monthly fee. As a result, loan defaults increase and it directly affects the profitability of the bank.

For Islamic banks, it does not charge fixed rate on their deposits or loan transactions, so inflation may be a factor in the cause's variations on bank's ability. Hence, the higher the interest rate, the higher bank profitability through lower capital and lending, then inflation is expected to have a positive impact on bank's profits. Referring to a study done in Nigeria by Obamuyi (2013), bank lending rates directly affect the bank's income and expenses, and net revenue affects profitability. Research found that interest rates had a positive impact that would affect the return on assets.

## 4. RESULTS AND DISCUSSION

The research approach is to observe the impact of Malaysia Ringgit Malaysia's fluctuation on local Islamic banks in Malaysia, covering a 10year period from 2007 to 2016 using secondary data. To determine the most significant variables, this study has resulted in a financial ratio of profitability ratio, efficiency ratio, liquidity ratio, bank size and tax. In analyzing all data, STATA software has been used as a sampling technique to run multiple regression analysis (multicollinearity). Annual data is collected from the financial statements and annual reports of 10 banks as well as Bank Negara Malaysia, up to 100 observations has been used for this investigation. The correlation between dependent and independent variables is also tested to determine the relationship between each variable. However, in this study, causal study has been selected to measure the effect of the effects upon changes in the incident. It involves one or more of the factors that are cause the problems.

The research will cover four independent variables that reflect the size of the bank's profits on local Islamic banks in Malaysia. Variables focus on debt to equity ratio, capital adequacy ratio, exchange rate, and interest rate.

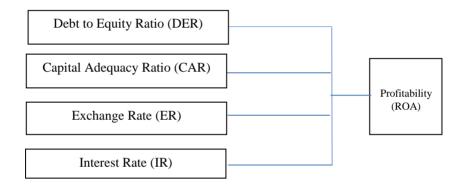


	TABLE 1.	<b>Descriptive Statistics</b>	
* *		-	

Independent Variab	Dependent Variable					
Variables		Mean				
Standard De	eviation	Min	Max			
Profitability			1.869059			
0.9652	378	0				
		3.8228				
Debt to equity ratio		1	2.0278	39		
6.403012			0			
		30.3759				
Capital adequacy ratio		13.25462				
7.066869			0			
		60.81				
Exchange rates			3.4	1454		
0.3418696		3.06			4.1483	
Interest rates				3.03		
(	).9780779		0			
		4.27				

TABLE 2. Correlation Statistics							
Profitability	Debt	Capit	al	Exchange	Interest		
to equity	adequacy	rates		rates			
	ratio		ratio				
Profitability				1.	000000		
Debt to equity ratio			0.38	70	1.000000		
Capital adequacy rat	io		0.53	21	0.3224		
		1.0	00000				
Exchange rates			-0.0	776	-0.0075		
	0.0478	1.0	00000				
Interest rates				0.6116	5		
0.4914	0	.5874	0.0223	1.000000			

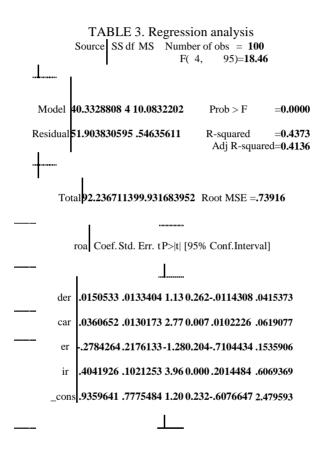
## 3.1 Descriptive results:

To analyze the result of the study, first it is useful to comment on some preliminary features of our data. Table 1 shows descriptive statistics for the profitability and the four variables used in our model. The mean of all other independent variables is positive. The mean of capital adequacy ratio is the largest (13.25) and varies greatly across variables (max = 60.81 and min = 3.06).

## 3.2 Correlation results:

Table 2 discovered the correlation among variables. Findings indicated that only exchange rates give negative relationship with profitability by -0.0776, while the other independent variables have positive relationship with profitability by 0.3870, 0.5321, and 0.6116. Overall, the correlation statistic result brings no multicollinearity problem

in obtaining the data because the value is 1.42 which is not more than 5 between independent variables.



#### 4.3 Regression Results:

This section shows the regression analysis of Islamic bank's profitability and its variables. The model shows the relationship between dependent variable and independent variables. The result illustrates the dependent variable had significant relationship with the independent variables at p-value 0.0000 which less than 0.00 level of significant. The R-squared valued 0.4373 or 43.73% of the variable changes means return on assets can be explained by all independent variables. While, another 56.27% is unexplained. For adjusted R-squared equals to 0.4136 which means 41.36% of the variation in return on assets can be explained by the variation of independent variables. Out of four independent variables, two variables are significant. Capital adequacy ratio and interest rates show a significant indicator at 0.01 level of significant and has positive relationship with the dependent variable.

Debt to equity ratio shows 1.50533% increase in return on assets which lead to positive but insignificant relationship. The result also similar with Yogendrajah and Thanabalasingam (2011) indicates that profitability is not strongly positive with the capital structure measured by the debt to equity ratio. This is because using more debt will lead to increase in required rate of return and it will give negative impact towards the probability of the firms. However, the result was conflicted with the studies by Leong et.al. (2013) and Husni (2011) stated that there is significant relationship between debt to equity ratio and the return on assets. Both findings show that loan loss provision is heavily dependent to the bank's performance. Increase in loan loss will lead to the increase debt to equity ratio, thus indirectly may affects the bank's profitability (Widiastuti et al., 2018).

For capital adequacy ratio, it shows 3.360652% increase in return on assets which found to be similar with Pasiouras and Kosmidou (2007) and Stephen et al. (2014). The result for exchange rate gives insignificant relationship with the bank's profitability where it decreases by 27.84264%, supported by Elizabeth (2015). Fluctuation of the exchange rate has negatively influenced the economy by making the cost of living more expensive. For instances, the banks are exposed to the exchange risk since the country or bank's itself heavily relies on the import's activities. However, this is contrary to other studies done by Carolyn and Daniel (2016) stated that the fluctuating and volatility of exchange rate may contributed to the growth of profitability banks. This is happened when many imports are bought and paid by the local using the dollars instead of Malaysian Ringgit. When the Malaysian Ringgit is weakening against the dollar, the banks are making an arbitrage profit. Besides, interest rate gives positive significant relationship with the return on assets increased by 40.41926%, similar findings with Obamuyi (2013) shows that the higher the interest rate will benefit the banks in term of higher profit.

		LS regressio	$\begin{array}{ll} n \text{ Random Effect} \\ \text{Number of obs} &= 100 \\ \text{Number of groups} &= 10 \end{array}$			
R-sq: within $=$ <b>0.5083</b> Obs per group: min =between = <b>0.2845</b> $avg =$ overall = <b>0.4011</b> $max =$					= 10.0	
	om effects u_ i_i, X)		Wald chi2(4) = 85.13 Prob > chi2 = 0.0000			
roa Coef. Std. Err. z P> z  [95% Conf. Interval]						
der	.0433484	.0115646	3.75	0.000	.0206822	.0660145
car	.0311148	.0105273	2.96	0.003	.0104817	.0517479

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er	2	258925	.1673665	-1.55	0.122	5869573	.0691072
ir	.2	373688	.0826228	2.87	0.004	.075431	.3993066
_cons	1.	100137	.6123508	1.80	0.072	100048	2.300323
			L				
sigma_u		.32453	3677				
sigma_e		.52695	5878				
rho		.27499	9075	(fracti	on of va	riance due to	u_i)
							_

From the above result, the overall r-squared value is 0.4011 which indicates that 40.11% of the total variation in the level return on assets for local Islamic banks in Malaysia occurs because of the variation in debt to equity ratio (DER), capital adequacy ratio (CAR), exchange rate (ER) and interest rate (IR). The remaining 59.89 percent might be due to the randomness or other variables (Alialbriki & Rahmankhan, 2019).

#### 5. CONCLUSION

The aim of this study was to examine the impact of Malaysia Ringgit fluctuations towards the profitability on the local Islamic banks in Malaysia by measuring its debt to equity, capital adequacy, exchange rate (RM/ US dollar) and interest rate. Measuring the profitability in terms of return on assets (ROA) is done by using banks specific variables during

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the period of 10 years starting from 2007 until 2016 by applying the panel data (random effect model).

Firstly, the study concludes the debt to equity has a positive but insignificant impact to the return on assets of the local Islamic banks. This indicates that using more debt will lead to increase the rate of return of the banks and it will give negative impact towards the profitability of the banks. The debt to equity ratio indicates how much the firm or banks are using finance its assets relative to the amount represented in shareholder's equity (Hermawati & Runiawati, 2019).

Secondly, there was a positively and significantly relationship between capital adequacy ratio and the bank's profitability. The capital adequacy is a minimum capital required by a banking institution to ensure that the bank has enough capital on account to meet obligations and absorb any unexpected losses. A rise of capital adequacy ratio results to reduction of in bank profitability and vice versa.

Thirdly, the study concluded that the exchange rate has a negative and insignificant relationship with the profitability of local Islamic banks in Malaysia. Moreover, the Ringgit Malaysia exchange rate against the US dollar was observed during the period of study. As the value of Ringgit Malaysia decreases against US dollar will lead to negative and significant impacts towards the return on assets of local Islamic banks in Malaysia.

Finally, the result of this study suggested that a positive significant relationship between interest rate and the return on assets of the local Islamic banks in Malaysia. This indicates that the interest rate has influenced the profitability of the banks in positively impact. A rise of interest rate will tend to the banks earned more income or profit.

The proceeding empirical analysis allows us to shed some light on the relationship between bank characteristics as well as industry and macroeconomic indicators and profitability of Islamic banks in Malaysia. From the research findings, recommendations can be given with regards to policy and practice in banking sector. As a matter of policy implications, we need to draw several proposals at the bank level which shows that size of the bank has a significant impact on the performance of Islamic banks. Consequently, Islamic banks in Malaysia should focus more on expanding the banks to achieved full benefits of economies of scale. For policymaker, they should standardize the economic environment to all local Islamic banks operates in this country. In addition, the regulator also has an important role to ensure and to safeguard the value of domestic currency as well as needs to implement efficient monetary and fiscal policies as to help any deficit balance of payment caused by the strong currency fluctuation. Islamic banks should also focus on predicting forthcoming inflation in the country. The capability of the banks to forecast future inflation helps banks to determine its interest rate above the inflation. However, when considering that Islamic finance does not deal with interest rates, it could be assumed that by forecasting and predicting the inflation rate could help the bank in making decisions with regards to the rate of profit sharing, loan quantity and asset quality.

#### **CONFLICT OF INTERESTS**

The author confirms that the submitted data do not contain the conflict of interests.

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