

Assessing the Determinants of Profitability Performance on Islamic Microfinance in Malaysia

Siti Nurulhuda Ibrahim, Nurul Izzat Kamaruddin, and Shahreena Daud

Abstract—This study able to determine the profitability performance of Islamic Microcredit in Malaysia whereby it focuses on the pioneer of Islamic Microcredit in commercial bank sector in Malaysia (EONCap Islamic Bank) that already been launched since at the end of year 2006. To identify the potential determinants of its profitability, the Least Square Method has been used to examine the relationship between dependent and independent variables and it covering the period from 2006 until 2012. The researcher used five independent variables that possibly can be as determinants of the profitability performance in Islamic Microfinance. The Return on asset is used as dependent variable whereas Cost Efficiency, Capital Ratio, Fuel Price, GNI per capita and GDP deflator as independent variables in a way to measure the profitability performance in this scheme. The result indicated that MFI-Specific and Macroeconomic Environment have positive and negative relationships with profitability performance. The result of the study is valuable for academic, banking and financial institutions.

Index Terms—Islamic microfinance, profitability performance, determinants, commercial bank.

I. INTRODUCTION

Nowadays, many new generations have an idea to develop some new business even it is just small business in the market. The source of financing is one of the important elements to be considered in setup new business. The capital also should be considered by entrepreneur to develop or improve some business either in new business or an existing business in the market so that it will give good impact to the Malaysia economy. There are many instruments that entrepreneur can used to finance the business. One of the instruments that can be used by small entrepreneur is through microcredit programs either in conventional or Islamic institutions. Conventional microcredit already started long time ago before Islamic microcredit in Malaysia that has been launched at the end of year 2006. Microcredit is the extension of very small loans that known as microloans to poor borrowers means that people who have a lower income and also typically have a lack collateral, steady employment and a verifiable credit history. It is designed not only to support entrepreneurship and alleviate poverty, but also to empower women and uplift entire communities.

In Malaysia, there are many financial institutions or organizations offering microcredit services either in

conventional or Islamic principles, i.e. Amanah Ikhtiar Malaysia (AIM), Tabung Ekonomi Kumpulan Usaha Niaga (TEKUN), Agro Bank, Bank Simpanan Nasional, CIMB Islamic Bank, EONCap Islamic Bank and Bank Rakyat. The Amanah Ikhtiar Malaysia (AIM) is Malaysia's largest microcredit and pioneer organization of microcredit programs in Malaysia. Microcredit in Malaysia began in 1987 and this nongovernmental organization that adopted the Grameen Bank model for rural microfinancing [1].

Due to difficulty and constraint to collect financial data from Amanah Ikhtiar Malaysia, we decided to focus only on Islamic Microcredit offered by commercial banks, i.e. Agro Bank, Bank Simpanan Nasional, Alliance Bank, CIMB Islamic Bank, EONCap Islamic Bank and Bank Rakyat. However to limit the scope of study, we only investigate more on EONCap Islamic Bank as according to [2], the EONCap Islamic Bank has already launched since at the end of year 2006 and become a pioneer of offering Islamic Microcredit in commercial bank sector in Malaysia.

In terms of profitability, profitability is a proper mechanism for achieving long term viability and sustainability of the Islamic microfinance industry. At the micro level, profitability is a requirement to a competitive microfinance industry and the cheapest source of capital, without which no firm would attract external capital [3]. Microfinance profits are also an important source of equity, if profits are reinvested and this may support financial stability of economy country. According to previous study by [2], the increasing profits of Islamic Microcredit become a challenging to the others conventional microcredit industry in Malaysia. Currently, Islamic microcredit in Malaysia is still new in market. The pioneer of Islamic Microcredit in Malaysia (EONCap Islamic Bank) shows that the net profit for Islamic microcredit is increasing year by year and at the same time challenges the increasing of conventional scheme in other financial institutions. Islamic microcredit is rooted in a desire for economic growth and prosperity of social-political systems based on Islamic principles that have been applied on trade, business, investing and mortgages within Muslim communities. Besides that, previous researcher reported that the Muslim demand for microcredit products based on *Shari'ah-compliance* has led to the emergence of Islamic microcredit as a new market niche [4]. Therefore, the aim of this study is to identify the potential factors that would affect the profitability performance of Islamic Microcredit in Malaysia. Besides that, according to [5], a similar analysis on profitability of microfinance could be done for all developing economies whether to draw by country, inter and intra-regional comparison as the effects are unlikely to be universal for all countries.

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II. DATA AND METHODOLOGY

For this research, 7 years data range was obtained within year from 2006 to 2012. Historical data information is included in this study and potential factors are Cost Efficiency, Capital Ratio, Fuel Price, Inflation Expectations (GDP deflator) and Per Capita Income (GNI Per Capita). All variable measurement has shown in Table I and the data gained from various secondary sources, i.e. data stream, bank's annual report, journals and websites. We examined the relationship by using a multiple linear regression models for statistical method in this study. This model examined the real time effects of several independent variables towards dependent variables. The Econometric Views Software (E-Views 7.0) was used to generate the result from the data that have been collected.

TABLE I: SUMMARY OF VARIABLES AND MEASUREMENT

Dependent Variable	Measure	Notation	Sources of data
Return on assets	$\frac{\text{Net profits after taxes}}{\text{Assets}}$	ROA	Bank's Annual report

Independent Variables		Measure	Notation	Sources of data
MFI-Specific Factor	Cost Efficiency	$\frac{\text{Total Expenses}}{\text{Total Revenue}}$	CE	Bank's Annual report
	Capital Ratio	$\frac{\text{Total Equity}}{\text{Total Assets}}$	CR	Bank's Annual Report
Macro-economic Environment Factors	Fuel Price	$P_x = PR \pm D$	FP	Data stream
	Inflation Expectations	Annual % change of the GDP deflator in period $t-1$	GDP	Data stream
	Per capita Income	GNI per capita	GNI	Data stream

A. Model Specification

In this study, we used Least Square Method to test the significant relationship between the variables. The model specification was modified according from study done by [5] whereby he examined some potential factors could affect the profitability of Microfinance Institutions in Africa. Hence, we proceeded with the estimation of the following specification:

$$\Pi_{ict} = \alpha + \sum_{j=1}^J \beta_j X_{ict}^j + \sum_{m=1}^M \beta_m X_{ct}^m + \varepsilon_{ict} \quad (1)$$

where Π_{ict} is the dependent variable which is the profitability of MFI i located in country c , at time t , with $i=1$. While α is the regression constant, X_{ict}^j is a vector of MFI-specific characteristic (j) of MFI i in country c during the period t which vary across time and MFIs; X_{ct}^m is a vector of macroeconomic variables (m) in country c during the period t , and $\varepsilon_{ict} = v_i + \gamma_t + \mu_{ict}$ is the disturbance; γ_t is the unobservable time effects, v_i is the unobserved complete set of individual MFI-specific effect, and μ_{ict} is the idiosyncratic error. Since ROA as dependent variable, the determinant

factors under MFI-specific characteristic that have been used in this study are Capital Ratio and Cost Efficiency Ratio. Meanwhile, for macroeconomic environment factors, there are Inflation Expectations (GDP deflator), Per capita Income (GNI per capita) and fuel price indicator.

B. Definition of Terms

According to [6], the return on assets (ROA) percentage shows how profitability of company assets is in generating the income. Basically, return on assets is an indicator of how profitability of company is relative to its total assets. ROA gives an idea as to how efficient the management is using its assets to generate earnings. Sometimes this is referred to as "return on investment". Moreover, ROA will tell what earnings were generated from invested capital (assets). Meanwhile, as mentioned by [5] in his study, the ROA is a more comprehensive measure of profitability and it is also widely used in the literature, which allows comparison with previous studies.

Cost efficiency was measure the relationship between income and overhead expenses where it measures the proportion of operating revenue on overhead expenses. According to [6], efficiency ratios measure the effectiveness of the firm's use of their resources and the ability to keep overhead cost low. This ratio that is typically used to analyze how well a company uses its assets and liabilities internally. Based on [7] in their study, they said that efficiency ratios are important because an improvement in the ratios usually translate to improved profitability and lower the cost.

The Capital Ratio measures the amount of equity and debt funding that has resulted in the company acquiring a certain fixed assets. Most long-term, fixed assets are financed by either an infusion of equity from stockholders or from debt financed from banks [6]. According to [8], higher Capital Ratio generally signifies more capital, meaning an institution is better positioned to meet financial obligations and address unexpected losses. Meanwhile, for regulated institutions, regulator often establish capital ratio or known as Capital Adequacy Ratio (CAR) floors that Microfinance Institutions (MFIs) must maintain. Capital Ratio is particularly informative when compared to regional benchmarks. An appropriate level depends upon the size and maturity of a MFIs as well as differing socio-political or economic contexts.

As mentioned by [9], the Deflators (%) of GDP (implicit price deflator for GDP) is a measure of the level of prices of all new, domestically produced, final goods and services in an economy. GDP stands for gross domestic product, the total value of all final goods and services produced within that economy during a specified period. GDP per capita is often considered an indicator of a country's standard of living.

Meanwhile, GNI is identical to GNP in value and can be thought of as income generated from the production of the nation's output. It is allows to more focus on people's income rather than nation's production. Thus, GNI Per Capita can be calculated by dividing total GNI by total population and known as income per person on average. [10]

Fuel price or known as crude oil prices come from the Crude Oil Import Register. According to [11], the information is collected according to type of crude and average price are

obtained by dividing value by volume as recorded by customs administrations for each tariff position. Value are recorded at the time of import and include cost, insurance and freight (CIF) but excluded import duties. As mentioned by [12], higher prices of commodities such as fuel prices will depress the profitability performance of bank.

III. FINDINGS

This part will show the finding of the study that can be interpreted through descriptive statistics and multiple linear regressions. Therefore, from the result, it will identify any significant relationship exist between independent and dependent variables.

A. Descriptive Statistics

Based on the descriptive statistics, we come out with this data in the ranges of which include mean, median, skewness, kurtosis and profitability. Table II below shows the descriptive statistics for the output which comprises of six (6) variables data for 7 years from year 2006 to year 2012.

TABLE II: SUMMARY OF DESCRIPTIVE STATISTICS

	ROA	CE	CR	FP	GNI	GDP
Mean	0.068800	0.835143	0.527057	26.18571	23.14286	5.085714
Median	0.068300	0.839100	0.498800	35.50000	24.00000	4.900000
Skewness	-0.171128	0.807827	0.392309	-0.539948	-0.689061	0.471821
Kurtosis	2.139779	3.131123	1.597656	1.581524	3.215201	3.191803
Probability	0.882500	0.681689	0.686211	0.629081	0.752975	0.873521

There are 7 observations included in this study and return on assets (ROA) as dependent variable which the mean and median are 0.068800 and 0.068300 respectively and the values are near to each other. The skewness value is negatively skewed with at value of -0.171128 (less than 1). While for kurtosis value indicates 2.139779 and probability value at 0.882500 which is more than 0.05 of the rules of thumb. Hence, it is normal distributed based on skewness and probability value.

Second variable is cost efficiency which the mean and median are 0.835143 and 0.839100 respectively which their values are also near to each other. The skewness value is positively skewed at 0.807827 (less than 1) whereby kurtosis value is at 3.131123. Therefore, it is also normally distributed since probability value is more than 0.05 and its skewness is less than 1.

Third variable is capital ratio which represents its mean and median are 0.527057 and 0.498800 respectively and can also be considered near to each other. The skewness value also shows positively skewed with the value of 0.392309 (less than 1) while for kurtosis value is 1.597656. The probability value is 0.686211 which is more than 0.05 and from the result of skewness and probability, it indicates a normal distributed.

The mean and median of fuel price are 26.18571 and 35.50000 respectively. This variable is negatively skewed based on skewness value of -0.539948 (less than 1). While, for kurtosis value it is 1.581524 and the probability value shows 0.629081, which is more than 0.05. Its represents normally distributed since skewness and probability followed rules of thumb.

The GNI Per Capita shows that its value of mean and median are near to each other, while its skewness is less than 1 and indicates as negatively skewed. The value of kurtosis is 3.215201 and its probability is more than 0.05. Therefore, from the result of skewness and probability, it is normally distributed.

Lastly, the inflation expectations (GDP deflator) with mean and median of 5.085714 and 4.900000 respectively represent that both values near to each other. The skewness is positively skewed at 0.471821 and is less than 1. Meanwhile, the kurtosis value is 3.191803 and probability value indicates more than 0.05 rules of thumb. Hence, from the result, it is also normally distributed.

B. Multiple Linear Regressions

The Table III shows the result of relationship for both variables. The main objective is to identify the potential factors that can influence the dependent variable. All results have been summarized on Table III below.

TABLE III: SUMMARY OF REGRESSIONS RESULTS (DEPENDENT VARIABLE: ROA)

R-squared = 0.998446		F-statistic = 128.4867	
Variables	Coefficient	T-Statistic	Prob
Cost Efficiency	40.94220	11.18298	0.0568*
Capital Ratio	5.147017	18.17794	0.0350**
Fuel Price	-3.749555	-12.84476	0.0495**
GNI Per Capita	19.18686	8.995638	0.0705*
GDP deflator	2.341018	9.904318	0.0641*

Note: Indicate significance: ***1% Level, **5% Level, *10% Level

As shows in Table III above, the R-Squared (R^2) is 0.998446. This result indicates that 99.84% of the variance in return on assets (ROA) is significantly explained by the all independent variables which are Cost Efficiency, Capital Ratio, Fuel Price, GNI Per Capita and GDP deflator. The remaining 0.16% will be explained by other factors that not include in this study. The study also shows that R^2 above is strong correlation between the variance since its R^2 is almost 100%.

The value of F-statistic is 128.4867 and it is supports that the relationship is significant which it indicate that all independent variables have significant with dependent variable.

The cost efficiency ratio has positive relationship with ROA where increases in cost efficiency will increase the ROA. Thus, we rejected null hypothesis of this variable. This result is proved by [7] in their study which found that, there is positive relationship between efficiency and profitability performance. Then, it shows the cost decision of Microfinance Institutions managements will influence the profitability performance of microcredit.

Capital ratio also has positive relationship with ROA. Therefore, we rejected null hypothesis for this variable. This result supported by [8] which mentioned that the positive relationship between the capital-assets ratio and profitability performances. The bank can achieve increasing in profitability when a bank with a sound capital position is able to pursue business opportunities more effectively, and in

another way has more time to deal with problems arising from unexpected losses. Meaning that, 1% increase in capital ratio will increase the ROA by 5.14%.

However, Fuel price shows negative relationship with ROA. This result explained that when the fuel price increases, it will decrease the profitability performance of the microfinance scheme. Meaning that, 1% decreases in fuel price will increase the ROA by 3.74%. This finding is consistent with the result of previous study by [12] as the higher price of fuel price will depress the profitability performance of bank. This result is widely expected given by a few countries that essentially commodity exporter and the negative effect of fuel price is likely due to the fact that majority of the countries is oil-importing countries. It will explain the negative effect of fuel price on the profitability of banks in the region as a whole.

There is positive relationship between GNI Per Capita with ROA. It shows that increase in GNI Per Capita will also increase profitability of microfinance scheme. This result is supported by [5] as he predicted positive relationship between these two variables. Therefore, as income per person on average increase, it will also increase the profitability of microfinance scheme. It is supported by previous researcher that according to [13], the positive relationship with the higher growth of GDP implies higher profitability of individual and corporate default and easiest access to credit.

Lastly, an inflation expectation (GDP deflator) shows a positive relationship with ROA. Basically, the macroeconomic factors will together influence the profitability performance of bank especially in microcredit. It means that on the average decrease by 1% in GDP deflator will decrease on ROA by 2.34%. According to [14], the percentage change in the GDP deflator, or *inflation*, is expected to increase the bank profitability, although low result in significance of the coefficients in the profitability regressions. It reflects that in an inflationary environment, banks obtain higher earnings from float or from delays in crediting customer accounts. Costs of bank generally also rise during inflation. A larger number of transactions may lead to higher labor costs, and as shown by [15], result in a higher bank branch per capita ratio. Therefore, the regression results suggest that the impact of inflation on profitability is positively significant.

IV. CONCLUSION

The empirical findings in this study are Cost Efficiency, Capital Ratio, Inflation Expectations and GNI Per capita have a positive relationship with ROA. However, Fuel Price given negative impact toward ROA. Hence, this study hopefully can contribute on a policy level, as mentioned by [5], it is important to examine factors that influenced the profitability performance of Microfinance Institution as it may help deepen the quality and quantity of access to finance particularly by the poor.

Therefore, to improve the quality and reliability for the research, it is suggested for future research to increase the data sample to give more accuracy of the result. The data sample and observation should be extended from this study

that observes 7 years to 10 years and above. This suggestion was supported by [16] that show the larger data taken will give more accuracy of the result.

Other than that, to get more an accurate data, future research can adds another financial ratio other than two independent variables that have been used in this study. As suggested by [5] certain variables such as grants, retained earnings, share capital, debt relative to assets and commercial funding liabilities could also be included as factors contribution in a study. He also mentioned that an institutional environment matter such as political stability, government effectiveness, rule of law, regulatory quality and corruption are quantitatively strong predictors of microfinance profitability.

The future research also can measure profitability by using the Return on Equity (ROE) rather than ROA. Here, as suggested by [16], ROE also can be used as a variable as diversity the variables will indicates the better results.

This study also focuses on macroeconomic conditions. In this study, we only used three external factors which are Fuel Price, Inflation Expectations and GNI Per capita. We suggest more external factors can be used such as consumer price index (CPI) growth rate and other macroeconomic factors. According to [12], the economic factor variable will reflect more on profitability as it is external factor and contribute large information to the management decision. Other than that, they said that the result will give more significant relationship towards company's profitability.

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