



Macroeconomics Variables and Its Impact to Mudharabah Investment Deposits in Malaysia

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ABSTRACT

This purpose of this paper is to study the impact of macroeconomics variables to Mudharabah Investment Deposits in Malaysia. It intends to examine the relationship and the significance influence between Gross Domestic Product (GDP), Rate of Return (ROR), Inflation Rate (INF) and Investment Deposits in Malaysia. Analysis was done using the Statistical Package for Social Science (SPSS). Pearson Correlation used in determining the relationship between the variables while three difference regression model (enter, forward, backward) used to determine the significance influence between the variables. The data gathered from Monthly Statistical Bulletin, Bank Negara Malaysia from 2003 until 2011. ROR showed there is significant strong positive relationship with Mudharabah Investment Deposit in Malaysia. It was found that by using three difference regression models, only one predictor namely Rate of Return (ROR) had significant influence with Mudharabah Investment Deposits while Gross Domestic Product (GDP) and Inflation Rate (INF) had no significant influence with Mudharabah Investment Deposits.

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Introduction

The banking system in Malaysia offered a variety of options for the Malaysian to manage their financial. It has dual system; conventional and Islamic banking where these two operation systems run simultaneously side by side. It offered a wide range of services from advisory up to the financing facilities. Leave aside of conventional banking businesses, the Islamic banking system are now has become a global trend and the effectiveness of the system is accepted by non-muslim world.

In Malaysia, with high awareness of the population (where the majority is Muslim) towards the halal and haram of the banking product plus the need and high demand for Islamic Banking from the public had surged the BNM, a central bank of Malaysia to set up another stream of banking line. The official kick-off of the Islamic Banking in Malaysia is in 1980s with the establishment of Bank Islam Malaysia Berhad with the operation of its Head Office and branches are governed by Islamic Banking Act (IBA) 1983.

A decade after the first establishment of the Bank Islam Malaysia Berhad, other financial institution such as commercial bank, merchant bank and finance companies were allowed by BNM to offer Islamic Banking products and services under special window called Islamic Banking Scheme (IBS). Since these financial institutions were built-up under fundamental of conventional banking practices, they are required to separate the funds and activities of Islamic Banking transactions from that of the conventional banking business to ensure that there would not be any element of gharar, riba, usury of funds. The national Syariah Advisory Council was set up by BNM to oversee the overall operation of these financial institutions on the Syariah aspect pertaining to the operation up to their product and services. There are common syariah concept used in Islamic banking which are Mudharabah, Murabahah, Wadiah, Musyarakah, Bai Bithaman Ajil, Wakalah and many more.

In Islamic banking, deposit can be categorised into three types namely 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. However this paper only focuses on Al-Mudharabah investment account deposits as dependent variables and Gross Domestic Product (GDP), Rate of Return (ROR) and Inflation Rate (INF) as predictors.

Mudharabah is a contract between two parties that is the owner of the capital and the entrepreneur. The depositor, who is the owner of the capital, places a specified sum of money with the Bank, who will acts as the entrepreneur for the purpose of anticipating in the profits made from the utilisation of the fund. Both parties agree with the profit distribution / sharing ratio. The depositor does not participate in the management of the funds. In case of a loss, the customer shall bear all the losses while the profits generated from the use of the customers' funds will be distributed according to the predetermined ratio agreed by the both parties.

Haron and Ahmad (2000) studied the relationship between rates of return on deposits. However this paper includes two other variables that were Gross Domestic Product (GDP) and Inflation Rate (INF) to examine the relationship. This paper is also different to the study done by Kasri and Kassim (2009) in which they focused on the relationship by using Mudharabah investment deposit in Indonesia while this study tries to study Mudharabah investment deposit in Malaysia.

This study is motivated by two factors. First, it is to determine any significant relationship between the dependent variables (Mudharabah Investment Deposit) with the predictors (Gross Domestic Product, Rate of Return and Inflation Rate). Therefore, the hypothesis below was developed and tested for this study:

Hypothesis 1:

H₁ - There is significant relationship between Gross Domestic Product (GDP) and Mudharabah Investment Deposits in Malaysia.

Hypothesis 2:

H₂ - There is significant relationship between Rate of Return (ROR) and Mudharabah Investment Deposits in Malaysia.

Hypothesis 3:

H₃ - There is significant relationship between Inflation Rate (INF) and Mudharabah Investment Deposits in Malaysia.

Second, it is to observe the significant factors (Gross Domestic Product, Rate of Return and Inflation Rate) that influence Mudharabah Investment Deposit. Thus the following hypothesis was suggested:

Hypothesis 4:

H₄ - There is at least one significant factors (Gross Domestic Product, Rate of Return and Inflation Rate) influence Mudharabah Investment Deposits in Malaysia.

Literature review

One of the sources of income to the bank is deposit. If the people tend to save more money in the bank, therefore banks can generate more loans to the customer which can create profit to the banks. This paper attempted to examine determining factors to Islamic deposit namely Mudharabah Investment Deposits. A review of literature and cross-reference studies provided many studies which examined the determining factors of banks' profitability. Most of the studies considered internal factors as well as external factors. As far as this paper is concerned only, the review of the literature on external factors will be taken into consideration.

Ergeç & Arslan (2012) had studied on the impact of interest rates on Islamic and conventional banks in Turkey. Their results discovered that the Islamic banks in Turkey are influenced by interest rates. Sharma and Mani (2012) studied on impact of macroeconomic and financial market indicators on the banking sector in India. Their results revealed that inflation has lower and insignificant with the performance of Indian bank. Muhamad Abduh et al. (2011) studied on impact of crisis and macroeconomic variables towards Islamic banking deposits in Malaysia. The results showed that there are no significant effects of interest and profit rate changes to the Islamic banking deposits. Furthermore, it was found that inflation shows negative effect on total deposits of Islamic banks during the recession. Moreover, financial crisis shows positive effect on total deposits in Islamic banks. Kasri and Kassim (2009) studied the relationship between real rate of return, interest rate, real income, number of Islamic bank branches and Islamic deposit in Indonesia. The result showed that mudharabah investment deposit had positive relationship with the real rate of return and negative relationship with the real interest rate. This implied that higher rate of return and lower interest rate were associated with higher level of the Islamic deposits. Even though the return to saving was a significant determining factor to save in Islamic banks, two other factors namely Islamic bank branches and real income were found to be insignificant in affecting the level of Islamic deposit in the long run. Kosmidou (2008) found that GDP had significant and positive impact while inflation had significant negative impact on profitability. On the other hand, money supply had no significant impact on profits. Hefferman and Fu (2008) study on the determinants of performance of Chinese banks found that real GDP growth rates and

unemployment also had significant effects on bank performance. Hondroyannis (2006) used panel cointegration techniques to determine private savings determinants for European countries. The results suggested that private savings were positively affected by the changes in dependency ratio, old age dependency ratio, government budget constraints, growth of real disposable income, real interest rate and inflation. However private saving was found to be negatively affected by liquidity constraint. Kosmidou et. al (2006) studied the determinants of profitability of UK Commercial banks which proved that macroeconomic variable was significant in explaining UK bank profits. Both GDP and inflation had positive association with bank performance. Athanasoglou et al (2006) discovered that inflation positively and significantly influenced the profitability while bank profits were not significantly affected by real GDP. Yusoff et al (2005) studied the contributing factors to conventional and Islamic deposits in Malaysia. among the variables tested were real gross domestic product, interest rates (conventional), rate of return (Islamic) and CPI. The study found that the entire variables tested were significant for conventional deposit as well as for Islamic deposit.

Another study done by Rachmawati and Syamsulhakim (2004) used the econometric's cointegration method. The result indicated in the long run, the number of Islamic bank's branch offices and profit sharing rate significantly affected the volume of mudharabah deposits in Indonesia. However Gross Domestic Product and interest rate use not affected. Authokorala and Sen (2004) used life-cycle model in investigating the determinants of private saving in India. Their results discovered that the real interest rate, growth and the level of per capita income, spread of banking facilities and inflation rate showed statistically significant positive influences on domestic saving. However, terms of trade changes and inward remittances by expatriate Indians showed a negative impact on the saving rate. Another study on determinants of private saving for Turkey as a sample was conducted by Ozcan et al. (2003). Their findings indicated that income level, financial depth and development measure and inflation had a positive impact on the private saving rate for Turkey. However Naceurs (2003) found that GDP and inflation were insignificant and had no impact in relation to profitability. Xin, M (2003) in his study on unemployment, consumption smoothing and precautionary saving in urban China found that urban households in China had strong precautionary saving motives, especially with regard to the prospect of some members facing unemployment. Once displacement occurs, households spent more and save less. Their results suggested that urban Chinese households had a reasonable ability to help themselves when facing temporary income shocks. A study conducted by Haron and Ahmad (2000) on the effects of conventional interest rates and rate of profit on funds deposited with Islamic Banking found that customers who place their deposits are motivated by profit maximization. The result shows that there is negative relationship between the interest rate of conventional banks and the amount deposited in interest free deposit facilities.

Data and methodology

As mentioned earlier, the objective of this paper is to study the determining factors to the Mudharabah Investment Deposits in Malaysia. The main variables for the paper were Gross Domestic Product (GDP), Rate of Return (ROR) and Inflation Rate (INF). Quarterly data covering the period from year 2003 to 2011 was taken from the Monthly Statistical Bulletin published by Bank Negara Malaysia. The Statistical Package for

Social Sciences (SPSS) Version 16.0 was used to analyze the data. Statistical testing such as Correlation and Multiple Regression analysis were applied in the analysis in order to test the hypotheses developed for the research.

The prediction equation is: $Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$

Where, Y = Mudharabah Investment Deposit

- α = constant
- X_1 = GDP
- X_2 = ROR
- X_3 = INF
- ε = Error

Results and discussions

Correlation

This section discusses the result obtained for the hypothesis set previously based on research objectives that were to determine any significant relationship between Mudharabah Investment Deposit and the GDP, ROR and INF. Table 1 below provides the results obtained from the analysis using Pearson Correlation. The result showed that there exist significant relationships but weak positive correlation between GDP and Mudharabah Investment Deposit with $r = .187, n = 36, p > 0.05$. Therefore H_1 was rejected.

However ROR showed that there was significant strong positive relationship with Mudharabah Investment Deposit. With the $r = .872, n = 36, p < 0.05$. Therefore H_2 was accepted.

Furthermore INF showed that there was no significant weak positive correlation with Mudharabah Investment Deposit, $r = .233, n = 36, p > 0.05$. Therefore H_3 was rejected.

Table 1. Pearson Correlation Result

	LOG_INV_DEP	GDP	ROR	INF
LOG_INV_DEP	1	.187	.872(**)	.233
Sig. (2-tailed)		.274	.000	.172
N	36	36	36	36

Note: Significance at: *p , 0.05 and **p , 0.01

Regression Results

Table 2 summarized the regression result using three difference regression models (Enter, Forward and Backward) to analyze significance influence between the variables. By comparing three difference regression models, the Enter method is the best method with the $R^2 = 0.782$. It means that 78.2% of the total variation in dependent variables (Mudharabah Investment Deposit) that can be explained by the variation in predictors (GDP, ROR and INF). The balance 21.8% of the variance remained explained by the other variables. The significance F-value was lower than 0.05 ($0.000 < 0.05$). Using the significance level of 0.05 it was suggest that the overall model statistically significant. Thus it could be interpreted that there is at least one significant predictors in the model significantly related to the dependent variable (Mudharabah Investment Deposit). Therefore, H_4 was accepted.

Table 2. Regression Result (Enter, Forward and Backward) Method

Method	R ²	F-statistic
Enter	.782*	38.23 (.000)
Forward	.760	107.848 (.000)
Backward	.781	58.981 (.000)

Table 3. Regression Result (Enter Method)

Variable	Unstandardized	t-value	p-value
β	Standard Error		
Constant	.340	.283	1.202
			.238

GDP	-.002	.007	-.257	.799
ROR	1.023	.101	10.164	.000
INF	-.022	.013	-1.741	.091

a Predictors: (Constant), INF_RATE, GDP, ROR

Table 3 shows with 90% confidence interval, there are two significant factors namely ROR ($p=0.000 < 0.10$) and INF ($p=0.091 < 0.10$) that influence Mudharabah Investment Deposit. The prediction equation below shows the overall result by using Enter Method:

$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$

Mudharabah Investment Deposit = .340 -.002GDP +1.023ROR -.022INF.

From the equation it showed that every 1% increase in INF resulted in decrease in Mudharabah Investment Deposit by RM0.022 respectively. While every 1% increase in ROR resulted in increase in Mudharabah Investment Deposit by RM1.023. Therefore it is confirmed that the only ROR are significant to Mudharabah Investment Deposit.

Conclusion and recommendation

As mentioned earlier, this study is to provide evidence regarding the determining factors to Mudharabah Investment Deposit in Malaysia by using three difference regression models (enter, forward and backward). The factors selected were Gross Domestic Product (GDP), Rate of Return (ROR) and Inflation Rate (INF). The first objective is to examine the significant relationship exists between Mudharabah Investment Deposit and Gross Domestic Product (GDP), Rate of Return (ROR) and Inflation Rate (INF). The result proved that only ROR represent the strong significant positive relationship with Mudharabah Investment Deposit while GDP and INF were not significant. The second objective is to observe the significant factors (Gross Domestic Product, Rate of Return and Inflation Rate) to Mudharabah Investment Deposit. The result discovered that all the predictors (GDP, ROR and INF) were significantly related to the dependent variable (Mudharabah Investment Deposit). Enter method showed the highest R^2 as compared with forward and backward method. It is proved that only ROR is significant to Mudharabah Investment Deposit compared with GDP and INF.

It is hoped that the result of this study may contribute some useful information not only to depositors and bank management, but also to the policy makers. Furthermore the findings can be used to recommend appropriate policy measures in order to strengthen the Islamic banking system in Malaysia.

As far as this study is concerned, there are other variables which can be considered as the determining factors to Mudharabah Investment Deposit. For further research, it can be recommended that other variables are applied as determining factors. The reason is because it might give different outcomes to the Mudharabah Investment Deposit.

A sample of thirty six month data would not represent all the Mudharabah Investment Deposit in Malaysia. It is suggested that future researchers could extend the study period to get more precise results.

References

Abduh, M, Omar, M.A & Duasa, J. (2011). The Impact of Crisis and Macroeconomic Variables Towards Islamic Banking Deposits *American Journal of Applied Sciences, Vol. 8, No. 12, pp.1413-1418*

Athanasoglou, P., Delis, M., & Staikouras, C. (2006). Determinants of bank profitability in the South Eastern European Region. *Munich Personal RePEc, Archive Paper No. 10274, posted 03, 1-31.*

- Athukorala, P.C., & Sen, K. (2004). The determinants of private savings in India. *World Development*, Vol. 32 No. 3, pp. 491-503. Bank Negara Malaysia, *Monthly Statistical Bulletin*, Various issues, Kuala Lumpur (Malaysia). Retrieved from <http://www.bnm.gov.my/>
- Ergeç, E.H. & Arslan B. G. (2012). *Impact of interest rates on Islamic and conventional banks: the case of Turkey*. *Applied Economics Volume 45, Issue 17*, pp. 2381-2388
- Haron, S. & Ahmad, N. (2000). The Effects of Conventional Interest Rates and Rate of Profit on Funds Deposited with Islamic Banking System in Malaysia. *International Journal of Islamic Financial Services*, 1(4): 1-7.
- Heffernan, S., & Fu, M. (2008). The determinants of bank performance in China. *Working Paper Series*, (WP-EMG-03-2008), Cass Business School, City University, UK.
- Ho, R. (2006) Handbook of univariate and multivariate Data analysis and Interpretation with SPSS, *Chapman and Hall/CRC; 1st edition*
- Hondroyannis, G. (2006). Private saving determinants in European countries: A panel cointegration approach. *The Social Science Journal*, 43 (2006) 553–569
- Kasri, R.A., & Kassim, S. (2009). Empirical Determinants of Saving in The Islamic Banks: Evidence From Indonesia. *J.KAU: Islamic Econ.*, Vol. 22 No. 2, pp: 3-23 (2009 A.D./1430 A.H.)3
- Kosmidou, K. (2008). The determinants of banks profit in Greece during the period of EU financial integration. *Managerial Finance*, 34 (3), 146-159.
- Kosmidou, K., Tanna, S., & Pasiouras, F. (2006). Determinants of profitability of domestic UK commercial banks: Panel evidence from the period 1995-2002. *Applied Research Working Paper Series*, Coventry University Business School.
- Naceurs, B. (2003). The determinants of the Tunisian banking industry profitability: Panel evidence. *Paper presented at the Economic Research Forum (ERF) 10th Annual Conference, Marrakesh-Morocco*, 16-18 December, 1-17.
- Overview of Islamic Banking in Malaysia. Retrieved from <http://pkukmweb.ukm.my/>
- Ozcan, K.M., Gunay, A., & Ertac, S. (2003). Determinants of private savings behaviour in Turkey. *Applied Economics*, Vol. 35 No. 12, pp. 1405-16.
- Pallant, J.(2001). *SPSS Survival Manual: A step by step guide to data analysis using SPSS or Windows (Version 12)*. Chicago: Open University Press.
- Rachmawati, E & Syamsulhakim, E. (2004). Factors Affecting Mudaraba Deposits in Indonesia. *Working Paper in Economics and Development Studies*, August, 2004
- Sharma, E. & Mani, M. (2012). Impact of macroeconomic and financial market indicators on the banking sector: some evidence from India *International Journal of Research in Finance & Marketing* .Volume 2, Issue 2
- Xin, M. (2003). Unemployment, consumption smoothing, and precautionary saving in urban China. *Journal of Comparative Economics*, 31 (2003) 465–485
- Yusoff, R & Wilson, R. (2005). An Econometric Analysis of Conventional and Islamic Bank Deposits in Malaysia. International association for Islamic economics. *Review of Islamic Economics*, Vol. 9, No. 1, pp.31-52.