The determining factors of wadiah saving deposits in Malaysia

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ABSTRACT

This paper attempts to study the determining factors of Wadiah Saving Deposits in Malaysia. It intends to examine the relationship between Gross Domestic Product (GDP), Inflation Rate (INF), and Rate of Return (ROR) and Wadiah Savings Deposits in Malaysia. Analysis was done by using the Statistical Package for Social Science (SPSS). Some of the techniques used to measure the factors were Pearson Correlation, coefficient of determination (R^2), ANOVAs, Multiple regression analysis, and T-statistics. Using the data from Monthly Statistical Bulletin, Bank Negara Malaysia from 2003 until 2010, and this study found that Rate of Return (ROR) influenced the changes of Wadiah Saving Deposits in Malaysia. By using T-statistics, the results showed that only one independent variables namely Rate of Return (ROR) had significant influence with Wadiah Saving Deposits while Gross Domestic Product (GDP) and Inflation Rate (INF) had no significant influence with Wadiah Saving Deposits.

Introduction
Overview of Islamic Banking in Malaysia

Islamic banking has emerged as a new reality in the global monetary view since the 1970s. More than 1,400 years ago, the philosophies and principles have been outlined in the Holy Qur'an and the Sunnah of Prophet Muhammad (p.b.u.h.). The emergence of Islamic banking is often related to the revival of Islam and the desire of Muslims to live all aspects of their live in accordance with the teachings of Islam.

In Malaysia, separate Islamic legislation and banking regulations exist side-by-side with those of the conventional banking system. The legal basis for the establishment of Islamic banks was the Islamic Banking Act (IBA) which came into effect on 7 April 1983. According to IBA, Bank Negara Malaysia is empowered to supervise and control Islamic banks, as well as other licensed banks. Bank Islam Malaysia Berhad (BIMB) was the first Islamic bank established in Malaysia which commenced its operations on 1 July 1983. In line with its objectives, the banking activities of the bank are based on Syariah principles. After more than a decade in operations, BIMB has proved to be a viable banking institution with its activity expanding rapidly throughout the country. The Islamic banking industry continues to grow supported by the conducive environment provided by BNM. To speed up development of the industry and create positive competitive pressure to take advantage of positive spill-over effects, BNM grants banking license to full-fledge domestic and foreign Islamic banks, particularly from the middle-east to operate in the country. By the end of 2010, several full-fledged Islamic banks commence operations resulting in seventeen full-fledge Islamic banks in Malaysia which comprises eleven local Islamic banks and six foreign Islamic banks. (BNM: List of Licensed Banking Institutions in Malaysia). With the continuous supportive banking policy provided by BNM, the Islamic banking industry has a bright prospect for growth in the country. The long-term objective of BNM is to create an Islamic banking system operating on a parallel basis with the conventional banking

system. To achieve this objective, an Islamic banking system requires three essential elements which are: a large number of players, a broad variety of instruments, lastly an Islamic money market.

In addition, an Islamic banking system must also reflect the socio-economic values in Islam, and must be Islamic in both substance and form. Due to that reason, BNM adopted a step-by-step approach. The first step to spread the virtues of Islamic banking was to disseminate Islamic banking on a nation-wide basis, with as many players as possible and to ensure they reach all Malaysians. After that, BNM decided to allow the existing banking institutions to offer Islamic banking services using their existing infrastructure and branches. The option was seen as the most effective and efficient approach of raising the number of institutions offering Islamic banking services at the lowest cost and within the shortest time frame. Subsequently, on 4 March 1993 BNM introduced a scheme known as "Skim Perbankan Tanpa Faedah" (Interest-free Banking Scheme) or SPTF in short. In terms of products and services, there are more than 40 Islamic financial products and services that may be offered by the banks using various Islamic concepts such as Wadiah, Mudharabah, Musyarakah, Murabahah, Bai' Bithaman Ajil (Bai' Muajjal), Ijarah, Qardhul Hasan, Istisna' and Ijarah Thumma Al-Bai'.

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 savings account deposits under Al-Wadiah as dependent variables and Gross Domestic Product (GDP), Inflation Rate (INF) and Rate of Return (ROR) as independent variables. Literally Al-Wadiah means deposits, whereby a person will appoint someone that he believes with to keep and protect his property. Al-Wadiah refers to the property that is committed to the trust and safe on the depository.

Previous research done by 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 while this study tries to use Wadiah deposit to be as dependent variable.

This study is motivated by several factors. Firstly, it is to study the determining factors to the Wadiah Savings Deposit in Malaysia. Secondly to determine any significant relationship between the dependent variables. (Wadiah Saving Deposit) with the independent variables (Gross Domestic Product, Inflation Rate and Rate of Return). Lastly, to observe the significant influence of independent variables Gross Domestic Product (GDP), Inflation Rate (INF), and Rate of Return (ROR) to the dependent variables (Wadiah Saving Deposit).

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 Al-Wadiah Islamic savings 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. Among them were Haron and Ahmad (2000), Naceurs (2003), Ozcan et al. (2003), Xin (2003), Rachmawati and Syamsulhakim (2004), Authokorala and Sen (2004), Yusoff et al (2005), Kosmidou et al (2006), Athanasogluo et al (2006), Hondroyiannis (2006), Heffernan and Fu (2008), Kasri and Kassim (2009). The external factors include economic growth as proxy by GDP, inflation rate as proxy by CPI, rate of return (profit rate), real interest rate, unemployment rate, money supply and per capita income.

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.

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.

Another similar 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 mudarabah 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.

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.

Hondroyiannis (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. Athanasogluo et al (2006) discovered that inflation positively and significantly influenced the profitability while bank profits were not significantly affected by real GDP. Pasiouras and Kosmidou (2007) conducted a similar study by comparing both domestic and foreign banks in 15 EU countries. The results indicated that inflation and GDP was positively related to domestic banks but negatively related to foreign banks. 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.

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.

Data and methodology

As mentioned earlier, the objective of this paper is to study the determining factors to the Wadiah Saving Deposit in Malaysia. The main variables for the paper were Gross Domestic Product (GDP), Inflation Rate (INF), and Rate of Return (ROR). Quarterly data covering the period from year 2003 to 2010 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. There were four hypotheses tested in this paper:

Hypothesis 1:

H_0 - There is no significant relationship between Gross Domestic Product (GDP) and Wadiah Saving Deposit in Malaysia.

H_1 - There is significant relationship between Gross Domestic Product (GDP) and Wadiah Saving Deposit in Malaysia.

Hypothesis 2:

H_0 - There is no significant relationship between Inflation Rate (INF) and Wadiah Saving Deposit in Malaysia.

H_1 - There is significant relationship between Inflation Rate (INF) and Wadiah Saving Deposit in Malaysia.

Hypothesis 3:

H_0 - There is no significant relationship between Rate of Return (ROR) and Wadiah Saving Deposit in Malaysia.

H_1 - There is significant relationship between Rate of Return (ROR) and Wadiah Saving Deposit in Malaysia.

Hypothesis 4:

H_0 - There is no significant influence between Gross Domestic Product (GDP), Inflation Rate (INF), and Rate of Return (ROR) and Wadiah Saving Deposit in Malaysia.

H_1 - There is significant influence between Gross Domestic Product (GDP), Inflation Rate (INF), and Rate of Return (ROR) and Wadiah Saving Deposit in Malaysia.

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 Wadiah Saving Deposit and the GDP, INF and ROR. The Table 1 below provides the results obtained from the analysis using Pearson Correlation. The result showed that there was a weak negative correlation which existed between GDP and Wadiah Saving Deposit with the $r = -.061$. However the results of INF showed that there was a weak positive correlation with Wadiah Saving Deposit with the $r = .166$. Therefore we accept null hypothesis (H_0) and the alternative hypothesis H_1 was rejected. Lastly the result for ROR indicated that there was a strong negative relationship with Wadiah Saving Deposit ($r = -.901$). As a result we rejected the null hypothesis (H_0) and accept alternative hypothesis (H_1).

As indicated by Table 2 below, the value of R^2 obtained is 0.803 means that 80.3% of the variation in dependent variables (Wadiah Saving Deposit) that can be explained by the variation in independent variables (GDP, INF, and ROR). The bigger value signified that the model of equation was fit. The balance 19.7% of the variance remained unexplained by the selected variables. The Durbin-Watson test was used to test serial correlations between errors (Field, 2005). The autocorrelation between variables under consideration as indicated by Durbin-Watson value of 1.699 which further confirmed that the estimates were statistically significant. The Durbin-Watson value 1.699 was close to 2, showing that residuals are uncorrelated and therefore the lack of autocorrelation assumption was not violated (Field, 2005).

Table 3 presents the ANOVA result which shows a test of significance for the overall regression model. It is measured from the significance of F-value in this table. In this study, the ANOVA expressed the $F = 38.091$. 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 estimated model existed and statistically significant. Thus it could be interpreted that all the independent variables (GDP, INF and ROR) were significantly related to the dependent variable (Wadiah Saving Deposit). Therefore, it can be concluded that the R^2 was statistically significant.

Regression Model:

Where, $Y = \alpha + \beta^1 X^1 + \beta^2 X^2 + \beta^3 X^3 + \varepsilon$

$SD = 10.503 - 0.002GDP - 0.001INF - 0.832ROR$
$\quad (0.124) \quad (0.010) \quad\quad (0.016) \quad\quad (0.832)$

Table 4 shows the coefficient result which can determine the significant relationship between the dependent variable and each of the independent variable. Moreover, this analysis also determines which factors contribute most to Wadiah Saving Deposit. From the equation it shows that a 1 unit increase in GDP, INF and ROR result in a decrease in Wadiah Saving Deposit by RM0.002, RM0.001 and RM0.0832 respectively. Note that the coefficient of GDP, INF and ROR shows the negative relationship with Wadiah Saving Deposit. There is no problem of multicollinearity that may constitute a problem affecting the regression analysis as all VIF values are less than 10. A higher VIF (>10) implies that the problem of multicollinearity (Pallant 2001).

Coefficient of beta value for GDP, INF and ROR is -0.017, -0.006 and -.892 respectively. The highest beta represents the strongest contribution of predictors in explaining the dependent variable. Rate of Return (ROR) shows the highest beta values of 0.892 as compared with GDP (0.017) and INF (0.006). Therefore it is confirmed that ROR is the strongest contributor to the performance of Wadiah Saving Deposit.

T-statistic is used to determine whether there is a significant influence between the dependent variable and each of the independent variables. From Table 4, the result shows that the significant t-value for ROR is .000 which is lower than 0.05. It indicates that there is significant influence between Rate of Return and Wadiah Saving Deposit. Therefore we reject H_0. However significant t-value for GDP and INF is higher than 0.05 which is 0.847 and 0.945 respectively. It indicates that there is no significant influence between independent variables (GDP, INF) and dependent variables (Wadiah Saving Deposit). Therefore we accept H_0.

Conclusion and recommendation

As mentioned earlier, this study is to provide evidence regarding the determining factors to Wadiah Saving Deposits in Malaysia. The factors selected were Gross Domestic Product (GDP), Inflation Rate (INF) and Rate of Return (ROR).

The first objective is to choose which, among the potential factors appears to be important to Wadiah Saving Deposit. From the findings, the result shows that ROR is the strongest contributor to Wadiah Saving Deposit.

The second objective is to examine the significant relationship which exists between the dependent variables and independent variables. The study found that INF has weak positive correlation as compared to ROR which shows strong negative relationship with Wadiah Saving Deposit. However, GDP shows that no significant relationship with Wadiah Saving Deposit.

The third objective is to identify factors which determined the Wadiah Saving Deposit in Malaysia. From the findings, the results indicate that one variable namely Rate of Return (ROR) have significant influence with Wadiah Saving Deposit with the value is 0.000. However, Gross Domestic Product (GDP) and Inflation Rate (INF) have no significant influence with Wadiah saving deposit. It was proved by the value of .847 and .945 respectively.

It is hoped that the result of this study may contribute some useful infomation not only to 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 Wadiah Saving 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 Wadiah Saving Deposit.

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

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Table 1: Pearson Correlation

	Wadiah	GDP	INF	ROR
Correlation Coefficient	1.000	-.061	.166	-.901**
Sig (2-tailed)		.742	.365	.000

Table 2: Coefficient of determination (R^2)

Model	R	R Square	Durbin-Watson
1	.896	.803	1.699

Table 3: ANOVA Result

Model	F	Sig.
Regression	38.091	0.000[a]

Table 4: Multiple Regression Model

Model	Unstandardized Coefficients		Standardized Coefficients			VIF
	B	Std. Error	Beta	t	Significance	
1 (Constant)	10.503	.124		84.574	.000	
GDP	-.002	.010	-.017	-.195	.847	1.104
INF	-.001	.016	-.006	-.070	.945	1.050
ROR	-.832	.082	-.892	-10.157	.000	1.098