

CAUSAL RELATIONSHIP BETWEEN ISLAMIC AND CONVENTIONAL BANKING INSTRUMENTS IN MALAYSIA

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Islamic banking industry makes significant contributions to the economic development process in Muslim countries. Its importance in the economy is due largely to an alternative source of banking, that is, profit and loss sharing concept. Like conventional banking, it performs the same function of collecting extra savings and extends towards the sectors, which need. Previously few attempts have been made to develop the relationships between an increase in interest rates and follow of funds from Islamic banking and vice versa. This paper proposes an alternative econometric procedure that can be used for determining the Islamic and conventional deposit returns linkages. This involves unit-root test and Granger causality test. The main purpose is to determine the impact of a fluctuation in one type of deposit returns on other. This helps us to assess the role of Islamic banking industry in the overall monetary distributional channels in a country.

1. Introduction

The central theme of this article is to examine the extent of substitutability¹ between Islamic and conventional banking depository returns. It compares the average aggregate data of Islamic and conventional term deposits returns (TDRs) offered under commercial banks, finance companies and merchant banks. It selects Malaysia as a case study, where the monetary authorities aim to run Islamic and the conventional banking system on a parallel basis. Here Islamic banking was first introduced with the establishment of Bank Islam Malaysia Berhad (BIMB) in 1983. However, the real competition for deposits started intensifying in 1993 when the government introduced the Islamic banking scheme (IBS). This scheme allows the conventional banks to offer and to participate in Islamic banking products and services through their existing branches. At the end of 2002 Islamic banking system represented 10.20% of the total deposits in a country.

This article argues that the links between monetary policy and Islamic and conventional banking TDRs are evident since the Central Bank of Malaysia is responsible for controlling and monitoring the financial system. The effects of its monetary policy would become less restrictive if Islamic and conventional banking systems in terms of depositing and financing rates are not close substitute of each other. For example, the conventional purpose of increase/decrease in the interest rates is to tighten/loosen the credit and to control the flow of surplus funds. This occurrence is unlikely in the case of Islamic banking if the depositors do not receive just returns on their investments. They would shift their funds towards other financial instruments and may make Islamic banking instruments less effective for monetary purposes.¹

2. Literature Review

The rates of interest have always been featured as one of the important considerations in explaining the savings behaviour of individuals. It is considered as the centre of the financial (savings and lending) activities, whereby the banking institutions offer different rates of interest on different types of depository schemes. In fact, it is the time value of money that determines the interest rate offers: the longer the maturity of deposits, the greater the yield that must be offered to the depositor. For instance, deposits under current accounts are subject to immediate withdrawal, therefore no interest is normally offered. In contrast, time deposits often carry higher returns, particularly those deposits made for several months or years. These rates of interest are fixed in advance so that the bankers and depositors know their respective costs and returns from the beginning.

Similar to conventional banks, Islamic banks offer numerous depository schemes. They also accept the capital provider's right to enjoy the best possible investment opportunities that arise from factors such as risk involvement, rate of profits and the period of investments. Ariff (1995) in his literature survey on Islamic banking found that Islamic banks around the world offer three main types of depository services such as current account, savings accounts and the investment accounts. Current accounts and savings guarantee depositors the nominal value of the deposit, but provide no guarantee on returns. The investment accounts operate fully under the profit/loss sharing (PLS) scheme where capital is not guaranteed neither any pre-fixed returns. Ariff also observed considerable variations within Investment accounts. For instance, the Islamic Bank of Bangladesh has been offering PLS Deposit Accounts, PLS Special Notice Deposit Accounts, and PLS Term Deposit Accounts, while Bank Islam Malaysia has been operating two kinds of investment deposits, one for the general public and the other for institutional clients.

Gafoor (2001) argued that Islamic jurists are only concerned that the element of risk should not be excluded from the financial transactions. Otherwise, it would no longer be one of business and trade, but of usury. The depositors have to be mentally prepared for risk of money diminishing as a result of losses incurred by the bank in its efforts to generate income. Gafoor further argued that the profits would have accrued from one year to another according to the performance of the bank, not according to changes in interest rates.

Overall, Islamic banking depositors have no privilege of knowing the percentage of profits in advance. Practically, they have to rely on the past deposit returns or compare with the interest rates offered by the conventional banks. One of the earliest survey was made by Khan (1983) who observed that Islamic banks operated under a dual banking system in the United Arab Emirates, Kuwait, Bahrain, Jordan and Egypt face little difficulty in devising practices in conformity with *shariah*. Islamic banks earn profit ranging from nine to twenty percent and offered return on deposits varied between eight and fifteen percent. These figures were quite comparable with the conventional banks.

Man (1988) in the case of Bank Islam Malaysia Berhad (BIMB) found that the average return to depositors has been quite competitive with that offered by conventional banks. By the end of 1986, after three years of operation, the bank had a network of fourteen branches. However, 90 percent of its deposits had maturities period of two years or less. The non-Muslim depositors accounted for only two percent of the total number of depositors.

Metawa and Almosawi (1997) who surveyed Islamic banks in Bahrain founded that religious beliefs are the basic reason for depositing money, followed by the rates of return and the bank's location. Haron and Noraffiah (2000) observed that in 1984, the Kuwait Finance House did not distribute profits at all. Surprisingly there was no incident of any serious withdrawal of money.

With the exception of the study conducted by Metawa and Almosawi (1997), which showed religion as the main factor for customer choice of Islamic banks in Bahrain, other studies found otherwise. A study made by Erol and El-Bdour (1989) indicated that Muslims patronized Islamic banks not specifically because of the religious factor, but more because of the returns they would receive from their investments. Depositors in Islamic countries also did not differentiate between the services offered by the conventional banks and the Islamic banks. They remarked that since religion is no longer the main factor in attracting depositors, Islamic banks should recognize that how the customers view their products and services. They should offer quality of service and products compatible with those offered by the commercial banks.

In Malaysia, Radiah (1993) observed that there are two main types of depositors among local Muslims. The first group represents those who strictly follow the religion in life and want to stick with Islamic banking at any cost. The second group consists of moderate Muslims. They give more priority to service quality and time value of their savings. Similar to this, Haron and Planisek (1994) found that profits and religion are the main motives behind depositing money with Islamic banks in Malaysia. They observed that only 40% of the Muslim customers give preferences to Islamic banking. The remaining majority including non-Muslim customers considers the time value as more important. They expect their banking transactions to be completed as fast as possible. Haron and Planisek also found that more than half of the Muslim and non-Muslim respondents indicated the possibility of establishing relationships with the Islamic banks if they have a complete understanding about their operations. The authors remarked that the top management of Islamic banks should realize the needs of time value of money and do not solely depend upon Muslims for deposits or as their fund users. They have to expand their base by including non-Muslims as potential customers.

Gerrad and Cunningham (1997) in the case of Singapore also came out with similar types of observations. They found that both religion and profits are the reasons for Muslims maintaining relationships with Islamic banking. However, on a question whether they would maintain their accounts with Islamic banking even if the Islamic bank fails to generate enough profit in any year, 61.70% of the sample respondents indicated determination of not withdrawing their money. The study, overall, concluded that non-Muslim customers are more profit-oriented as they give more preferences to higher rates of returns.

Haron and Shanmugam (1995) empirically linked the rates of interest to total Islamic deposits in case of Malaysia. They used Pearson correlation and the first order autoregressive models. The authors found strong negative relationships between interest rates and the total Islamic deposits. Islamic depositors respond significantly with the change in interest rates.

In another study, Haron and Noraffiah (2000) analyzed the relationship between total Islamic deposits and rate of returns offered under Islamic and conventional banking schemes in Malaysia. They used the "Adaptive Expectation Model" and covered the period from January 1984 to December 1999 on a monthly basis. Their findings showed negative relationships between the interest rates and total interest free deposits. They observed that Islamic savings and investment accounts holders are highly influenced by the profit motive.

3. Hypothesis

The above discussion presumes that the market forces like information towards substitutes, service quality and the religious believes are all relevant factors affecting the behavior of Islamic banking depositors. Alternatively, it can be summarized that Islamic banking follows the concept of profit/loss sharing. Its depositors have no privilege to know the exact amount of returns that they will receive on their investments. Therefore, if the assumption is Islamic depositors' hold the attitude of profit maximization, then there is a greater possibility that the amount of Islamic deposits is heavily influenced by its own historical rates of returns and the existing conventional banks interest rates. The management of the Islamic banking should not take its depositors for granted due to prohibition of interest. It should reward returns at least equal to conventional banks interest rates.

The conclusion leads towards a hypothesis that if the management of Islamic banking in Malaysia believes that its depositors attain the same attitude of profit maximization; interest rates will continue to affect the Islamic rates of return as long as Islamic banking does not attain the certain proportion of total banking deposits and assets in a country.

4. Methodology

Granger causality test is applied to investigate relationships between Islamic and the conventional term deposit returns (TDRs) held under six different categories i.e. 1 month, 3 months, 6 months, 9 months, 12 months and saving accounts. The technique helps in forecasting about a particular variable by incorporating the past and present values of another variable. In our research, the Granger causality models help in investigating relationships, direct or reversal, between the Islamic and conventional TDRs.

The models run in a simple way such as conventional TDRs Granger-cause Islamic TDRs or vice versa. The output from the regressions gives the relevant F-statistics for the hypotheses. It is true if the null hypothesis is rejected. Equations no 1 and 2 explain the Granger causality test as,

$$\text{Int}_t = a + \sum (\text{Isl})_{t-i} + e_t \quad (1)$$

$$\text{Isl}_t = a + \sum (\text{Int})_{t-i} + e_t \quad (2)$$

Where "Int" and "Isl" stand for the change in the conventional and Islamic deposit returns during the "t" period.

This article covers the period from January 1994 to December 2002 on a monthly basis. It covers TDRs returns offered under commercial banks, finance companies and merchant banks. It collects all the secondary data is collected from the Central Bank of Malaysia quarterly publications.

5. Results & Discussion

Initial results related to the stationary of all the time series are presented in table 1. It covers term deposits returns (TDRs) series offered under commercial banks, finance companies and merchant banks. The outcomes are calculated by using augmented Dickey-Fuller test. In all cases the null hypothesis of unit roots are not rejected and having an order of integration at I (0).

Table 1
Dickey Fuller Tests for Presence of Unit Root in Islamic & Conventional TDRS

		Commercial Banks		Finance companies		Merchant Banks	
TDRs		T stat	T stat ^a	T stat	T stat ^a	T stat	T stat ^a
1 Month	Islamic	-1.16	-3.58**	-1.11	-4.62**	-0.87	-3.60**
	Conventional	-1.00	-3.67**	-1.03	-3.47*	-0.31	-5.15**
3 Months	Islamic	-1.19	-3.32*	-1.16	-4.47**	-1.02	-3.79**
	Conventional	-0.87	-3.42*	-1.03	-3.63**	-0.41	-5.47**
6 Months	Islamic	-1.21	-3.42*	-1.21	-4.47**	-0.95	-3.43**
	Conventional	-1.09	-3.57**	-1.13	-3.64**	-0.43	-5.43**
9 Months	Islamic	-1.29	-3.46*	-1.21	-4.58**	-0.51	-3.47*
	Conventional	-1.04	-3.47*	-1.19	-4.36**	-0.43	-3.72**
12 Months	Islamic	-1.11	-3.51**	-1.33	-4.63**	-1.25	-2.95*
	Conventional	-1.01	-3.99**	-0.99	-4.27**	-0.49	-3.45*
Savings	Islamic	-0.63	-4.34**	-0.57	-4.28**		
	Conventional	-0.91	-3.97**	-0.54	-4.63**		

Note: ^astands for figures at first difference.
See Mackinnon (1991) for critical values

The test statistics were computed based on the regression that includes two lags of the first difference of the dependent variable

Causal Relationship

Table 2
Results of Granger Causality Test for Islamic and Conventional TDRS offered under Commercial Banks

			Conventional TDRs do not cause Islamic TDRs		Islamic TDRs do not cause Conventional TDRs	
	Model	obs	F statistics	P value	F statistics	P value
I-Month	VEC	108	23.04**	0.00	2.12	0.12
3-Months	VEC	108	29.24**	0.00	0.62	0.54
6-Months	VEC	108	24.00**	0.00	0.71	0.49
9-Months	VEC	108	23.38**	0.00	0.54	0.59
12-Months	VEC	108	28.69**	0.00	1.21	0.30
Savings	VEC	108	19.13**	0.00	0.88	0.42

Note:
** significant at the 1% level, * significant at the 5% level
VEC denotes vector error correction

Table 2 presents the Granger causal relationship between conventional and the Islamic TDRs series offered under commercial banks. It covers the period from January 1984 to December 2002. The results show that conventional TDRs have strong impacts in all cases. F statistics figures are significant at 1% level. It supports our hypothesis that currently conventional TDRs have strong impact on Islamic TDRs. Table 2 does not find any inverse relationship where Islamic TDRs granger causes conventional TDRs.

Table 3
Results of Granger Causality Test for Islamic and Conventional TDRS offered under Finance Companies

			Conventional TDRs do not cause Islamic TDRs		Islamic TDRs do not cause Conventional TDRs	
	Model	obs	F statistics	P value	F statistics	P value
I-Month	VEC	108	6.09**	0.00	3.23*	0.04
3-Months	VEC	108	10.08**	0.00	0.33	0.71
6-Months	VEC	108	7.49**	0.00	0.99	0.91
9-Months	VEC	108	6.86**	0.00	1.62	0.20
12-Months	VEC	108	8.35**	0.00	0.26	0.77
Savings	VEC	108	11.92**	0.00	1.03	0.36

Note:

** significant at the 1% level, * significant at the 5% level

VEC denotes vector error correction

Table 4
Results of Granger Causality Test for Islamic and Conventional TDRS offered under Merchant Banks

			Conventional TDRs do not cause Islamic TDRs		Islamic TDRs do not cause Conventional TDRs	
	Model	obs	F statistics	P value	F statistics	P value
I-Month	VEC	108	10.18**	0.00	0.19	0.82
3-Month	VEC	108	11.84**	0.00	2.25	0.11
6-Month	VEC	108	13.38**	0.00	2.75	0.07
9-Month	VEC	108	8.94**	0.00	8.53**	0.00
12-Month	VEC	108	9.71**	0.00	9.74**	0.00

Note:

** significant at the 1% level, * significant at the 5% level

VEC denotes vector error correction

Table 3 highlights the Granger causal relationship between conventional and Islamic TDRs series offered under finance companies. It shows that all conventional TDRs series fall in the critical region at 1% level. The results also show that Islamic 1-month TDRs series also grange cause conventional TDRs series at 5% significance level. It concludes high level of competition for short-term deposits between Islamic and conventional banking.

Table 4 demonstrates the Granger causality relationship between conventional and Islamic TDRs series offered under merchant banks. It shows that all conventional TDRs series fall in the critical region at 1% level. The results also show that 9 months and 12 months series reject the null hypothesis of no significant impacts of Islamic TDRs series on conventional TDRs series and are significant at 1% level. These figures conclude high level of competition for long-term deposits between Islamic and conventional TDRs series.

6. Conclusion

This article develops the causal relationship between the conventional and Islamic TDRs. It provides evidence that the conventional TDRs Granger cause Islamic TDRs in all categories. Our results also find significant competition between Islamic and conventional TDRs series in case of finance companies and merchant banks. Overall results conclude that Islamic banking considers interest rates before adjusting its deposits returns.

7. Notes

¹ Substitutability is defined as the extent to which the service activities that the current service provider performs are available from alternative sources

² According to the Central Bank of Malaysia (BNM) annual report (2001, p.148-149), BNM formulated a standard framework for the computation of the rate of return for Islamic banking institutions, aimed at providing a level playing field and terms of reference for the Islamic banking players in deriving the rate of returns. The framework would allow BNM to assess the efficiency, profitability, prudent management and fairness of Islamic banking institutions more effectively. Furthermore, the standardization of the calculation of the rate of return would serve to address the information asymmetry between the bank and its depositors, by enhancing transparency and ensuring the depositors receive the fair share of the rate of return on investment, in conformity with the *shariah* principle”

8. References

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