

## **A Panel Data Analysis of Fee Income Activities in Islamic Banks**

SHAHIDA bt. SHAHIMI

*Candidate of Islamic economics and assistant lecturer  
of Islamic economics, banking & finance,  
Email: [shahida@pkisc.cc.ukm.my](mailto:shahida@pkisc.cc.ukm.my),*

ABD. GHAFAR B. ISMAIL

*Professor of banking and finance,  
Email: [agibab@pkisc.cc.ukm.my](mailto:agibab@pkisc.cc.ukm.my)*

and

SANEP B. AHMAD

*Lecturer of Islamic economics and statistical economics,  
Email: [nep@pkisc.cc.ukm.my](mailto:nep@pkisc.cc.ukm.my)  
Islamic Economics and Finance Research Group  
School of Economics  
Universiti Kebangsaan Malaysia, Malaysia*

**ABSTRACT.** In recent years, commercial banking worldwide has experienced a significant decline in its traditional business of accepting deposits and offering loans. Simultaneously, banks have become more involved in nontraditional activities that provide financial services and generate fee income. As a result, income from nontraditional activities has risen relative to income from traditional activities. This article presents an empirical investigation of Islamic banks' involvement in various fee income activities. Our theoretical hypotheses relate the level of fee income activities at an individual bank to asset size, profitability, core deposits, capital risk as well as credit risk. These hypotheses are tested empirically using bank-specific information from a panel of Malaysian Islamic commercial banks for the years 1994 to 2004. The results imply that banks with higher levels of fee-generating activities tend to have higher assets and core deposits as well as exhibit less risk. These findings show that banks involved in nontraditional activities have more diverse sources of funds and greater access to financial markets, which reduces risk. Since the findings suggest that banks with a greater involvement in nontraditional activities must resort to alternative sources of funds to finance their operations, nontraditional activities appear to be one method a bank can use to generate income. Furthermore, institutions engaged in such activities tend, to a larger extent, to be safer. Therefore, the underutilized fee income plays an important alternative source of revenue, hence able to reduce the over-dependence of Islamic banks on debt-financing as the main source of revenue.

## 1. Introduction

In the wake of competitive environment of banking market in the era of financial liberalization, banks have been forced to be more entrepreneurial and to innovate in order to survive. They have entered new markets and developed new products. Their traditional intermediation business of accepting deposits and offering loans has been steadily declining especially in the US and UK (Allen & Santomero, 2001; Moshirian & Van der Laan, 1998; Rogers & Sinkey, 1999). Given that banks faced shrinking margins and financial product innovations have resulted in an increase in non-interest income by increasing importance of banks' commissions and fees at the expense of interest related income.

The increasing importance of non-interest income has allowed banks to shift their traditional business from simple balance sheet intermediation with nontraditional activities such as fee-producing activities; ranging from underwriting activities to cash management and custodial services (e.g. pension funds, mutual funds, wealth management), and trading income. This has been accomplished by financial institutions shifting their role from principal to agent in many transactions. With respect to Islamic banks, they can earn fee income by providing other commercial and investment banking services such as fund transfers, letters of credit, foreign exchange transactions and investment management and advisory services to retail and corporate clients in addition to their asset management.

Some banks find it too costly to engage in certain types of nontraditional activities (e.g. servicing credit card receivables or underwriting derivative securities). For others, if economies of scale exist, as suggested by Hunter and Timme (1986), then marginal unit cost of providing these activities depend, in part, on a bank's customer base and some nontraditional activities are only applicable to certain types of customers.<sup>(1)</sup> Since most banks have an opportunity to serve at least two of the customer segments e.g. corporate banking and retail banking, they can provide nontraditional products and services to enhance their revenue streams.

While considerable literature exists on banks' nontraditional activities, it tends to look at different activities separately and focus on how these activities affect the level of risk at an individual bank (e.g. Avery & Berger, 1991; Boot & Thakor, 1991; Hassan, 1992 & 1993; Hassan et al., 1994; Hassan & Sackley, 1994). These studies do not consider what types of banks i.e. conventional or Islamic banks and large or small banks tend to be heavily involved in nontraditional activities.

In Islamic banking, intermediation contracts provide agents with a set of tools to perform financial intermediation and to offer fee-based services for economic activities. The contracts like *kafalah* (guarantee), *amanah* (safe keeping), *wakalah* (agent) and *ju'alah* (promise/reward) complement the functions of Islamic banks as financial intermediaries by offering services for a fee to facilitate economic activities of consumers, corporate and public sector.<sup>(2)</sup> For example, on the liabilities side, a bank

---

(1) Banks direct their financial services to three distinct market or customer segments: corporate banking (e.g. risk management), private banking (e.g. wealth management), and retail banking (electronic and internet banking).

(2) Further discussion on underlying contracts of fee or commission in Islamic financial intermediary can be found in **Iqbal** (2004).

can offer general custodial services for consumers and corporate (or representative of capital owners who is able to direct the management of investment more closely) in return for fee income.<sup>(3)</sup> These contracts have not received due attention of researchers in the context of their usage in intermediation in spite of their vital role in performing many of the functions which modern financial intermediaries are performing. Through these contracts, other functions of a financial system such as custodial services, brokerage, consulting, guarantees and insurance can be designed.

The vast potential of fee income at Islamic banks along with the lack of attention given to the underlying contracts of fee income motivate us to examine the factors that may affect the nontraditional activities in these institutions. By doing so, this study contributes to the extant literature by two ways. First, we broaden the study of nontraditional activities in US commercial banks originated by Rogers and Sinkey (1999) by examining Islamic banks in Malaysia. Second, we introduce the influence of credit risk measured by non-performing loans, *i.e.* ex-post credit risk, instead of loan loss provision (LLP) used by Rogers and Sinkey (1999). We find that the LLP is not an accurate or direct measure of credit or default risk on loans offered by banks, *i.e.* ex-ant credit risk.

The remainder of this paper is organized as follows. Section 2 will present the stylized facts of nontraditional activities with special reference to fee income and bank characteristics as the determinants of fee income. These relevant factors will ensure unbiased estimation and constitute as control variables. Drawing from the earlier findings, Section 3 will construct an empirical model of the determinants of fee income in Malaysian Islamic banks. Section 4 reports the estimation results. The final section summarizes the conclusions.

## 2. The Stylized Facts

The first Islamic bank was established in 1975, and in 2005 it will be thirty years of Islamic banking practice worldwide. A number of Islamic banks have been established during this period under heterogeneous social and economic milieu. The practice of Islamic banking now spreads from East to West all the way from Indonesia and Malaysia towards Europe and the Americas. The successful operation of these institutions and the experiences in Iran, Sudan, Malaysia and Bahrain are satisfactory to show that Islamic banking offers an alternative method of banking.<sup>(4)</sup> The fact that many conventional banks, including some major multinational banks such as Citibank, HSBC, OCBC, and Standard & Chartered have also started using Islamic banking techniques is a further proof of the viability of Islamic banking.

Serious research works over the past two and half decades have shown that Islamic banking is not only feasible and viable; it is an efficient and productive way of financial intermediation. Traditional activities of a bank as the financing of loans with deposits where banks act as intermediaries, transferring funds from savers or surplus units to borrowers or deficit units. The costs of (traditional) financial intermediation known as

---

(3) The practice of accepting deposits on the basis of *wakalah* is common in the Islamic Republic of Iran banking sector.

(4) First Islamic bank in Malaysia, Bank Islam Malaysia Berhad (BIMB) started its operation in 1983.

margin, is one of the significant proxy to bank profitability and operational efficiency. In addition, the margin reflects the competition in banking market.

For Islamic banks, income consists of profit generated from various banking activities including; financing such as equity-financings (*mudarabah & musharakah*), debt-financings (*bay' bi thaman ajil, murabahah* and *ijarah*); participation in direct investment (investment securities and dealing securities); and non-financing income, such as fee and other operating income. Fee income comprises commissions and guarantees, service charges and other fee income which are developed based on several underlying contracts (Appendix). Table-1 illustrates fee income components of Malaysian Islamic banks by type of fund for the period 2002-2003. Overall, the data reflect the substantial increase in the level of fee income activities over the consecutive years. This is an evidence of increasing specialization of Islamic banks especially in managing the depositors' Islamic banking fund by utilizing fee-based products. For example, commissions and guarantees (RM40.9 million), service charges (RM27.1 million), as well as other fee income (RM29.7 million) increase immensely in 2003 relative to 2002. This phenomenon, however, has not necessarily been constant across all banks in the sample. While some banks are highly specialized in fee income activities, other banks still rely primarily on traditional activities to generate revenue, namely debt-financing income. Our analysis of this heterogeneity highlights the fee income activities for Islamic banks in Malaysia.

**TABLE 1. Fee Income Activities of Malaysian Islamic Banks by Type of Funds, 2002-2003 (RM'000).**

Fee Income Activities	Shareholders'/Islamic Banking Fund		Depositors' Fund	
	2002	2003	2002	2003
Commission & guarantee	14 693	40 966	1 901	3 964
Service charge	2 381	27 123	552	3 185
Other fee income	12 336	29 746	1 582	2 515
<b>Total Fee Income</b>	<b>29 410</b>	<b>97 835</b>	<b>4 035</b>	<b>9 664</b>

Source: Commercial Banks' Audited Annual Reports, 2002-2003.

### 3. Research Design

#### 3.1 Sample

The data used in the empirical analysis are collected from the banks' audited and published annual financial-year-end reports of the selected Islamic banks observed from 1994 through 2004. The financial statements (disclosure) prepared by the Malaysian banks are standardized according to the requirements of GP8 Guidelines on the Specimen Financial Statements for Banking Industry issued by the Central Bank – Bank Negara Malaysia. Based on this guideline, both conventional and Islamic banks follow the same accounting standard which make it possible for direct comparison across banks and over time. The data comprise two full-fledged Islamic banks and sixteen Islamic banking schemes (IBS) offered by conventional banks, since we have to take into account the banks-specific characteristics (e.g. full-fledged vs IBS) in the sample.

### 3.2 Dependent Variables

Fee income is measured by the ratio of fee income from investment of shareholders' or Islamic banking fund plus fee income from investment of depositor's fund to total asset. The ratio, which measures the relative magnitude of nontraditional activities at an individual Islamic bank, serves as the dependent variable in the regression analysis.

### 3.3 Independent Variables

In general, banks should choose the appropriate level of nontraditional activities to maximize profits, given their customer bases and cost structures. However, as suggested by Rogers and Sinkey (1999), Demircuc-Kunt and Huizinga, (1998, 2000), Demircuc Kunt et al. (2003), and Hassan & Bashir (2003), the exact nature of involvement in nontraditional activities at an individual bank may be linked to various bank-specific characteristics as discussed below.

a. *Bank Size*: The most obvious factor related to the level of nontraditional activities is bank size. It is hypothesized that large banks have higher level of nontraditional activities than smaller banks. This is due to the fact that participation in certain activities generally require some degree of specialization. Hunter and Timme (1986) found that larger banks are better equipped to use new technology and exploit the resulting cost savings and/or efficiency gains. Therefore, bank size will have a positive relationship with the level of nontraditional activities. To capture the influence of this variable, bank size measured by logarithm of total assets (ASSET) is a standard control variable employed in empirical studies. Including bank size as an explanatory variable allows for the interpretation of the marginal effects of the other independent variables, after removing the effect of bank size.

b. *Bank Profits*: At an individual bank, the level of nontraditional activities chosen by management can be analyzed in light of profits earned from traditional activities. As regards this type of profit, two possible scenarios would exist. First, it may be that the profits are low compared to its competitors, inside and/or outside of the banking industry. Volumes of profits or net income margins, or both, are declining. In this case, a measure of nontraditional activities would be inversely related to a measure of profits from traditional activities across a sample of banks. Secondly, the profits from traditional activities may be high relative to competing banks. Either volume or the margins has not declined, or a decline in one is offset by a rise in the other. Here, the income from nontraditional activities is augmenting the profit from traditional activities. If this situation exists throughout the banking industry, a direct (positive) relationship between nontraditional and profits from traditional activities would be observed. The investigation of this hypothesis should shed some light on the level of profits from traditional activities at banks with large amounts of nontraditional activities.

Profits from traditional activities in Islamic banks are measured by net income margin (NIM). It is calculated as the ratio of the difference between income from investment of depositors' fund and income attributable to depositors, to total assets. The margin creates a wedge between returns on deposits and loans, and reflects cost of bank intermediation services and the efficiency of the banking sector. In general, the higher the NIM, the higher are the banks' profitability, and more stable is the banking sector. If banks with

large amounts of nontraditional activities have fewer profits from traditional activities, then a negative relationship would exist between fee income and NIM, vice versa.

c. *Core Deposits*: The level of nontraditional activities at a bank might also be related to its liability structure. Core deposits at bank consists of demand, saving and investment deposits are lower cost sources of funding compared to equity or debt-financing. Unlike traditional loans or debt-financings, certain nontraditional activities allow banks to provide services without having to obtain balance sheet funding. For example, a bank may issue letters of credit which generate fee income for the bank but do not require immediate funding. If a bank is constrained in the volume of core deposits it can attract, it may produce a larger quantity of nontraditional activities concurrently with finding other sources of funds. Hence, nontraditional activities may be related to the level of core deposits at a bank.

Our proxy for the effects of liability structure is a bank's volume of core deposits as measured by the ratio of deposits from customers plus deposits at banks and financial institutions subject to reserve requirement to total assets (DEPOSITS). This ratio measures the relative quantity of core deposits at a bank. A bank that is forced to rely heavily on sources of funds other than core deposits would have a low ratio. If these banks are also heavily involved in nontraditional activities, a negative relationship will be observed with fee income.

d. *Bank Risk*: Also related to nontraditional activities is the relationship between risk at banks and nontraditional activities. Some researchers find that nontraditional activities reduce bank risk, e.g. Hassan (1994) for standby letter of credits; Hassan and Sackley (1994) for loan commitments; and Hassan (1993) for off-balance sheet activities. As far as Malaysian banking system is concerned, the absence of deposit insurance guarantee hinders banks from engaging in risky nontraditional activities freely. Hence, one would expect banks with more involvement in nontraditional activities to exhibit more risk and need 'assurance capital' to enter nontraditional activities (Merton & Bodie, 1992). Despite this shortcoming, banks may engage in these activities to increase their market valuation. Nontraditional activities might help to reduce the risk of bankruptcy since they will be diversifying the income generated by the bank, which could have a positive effect on bank value. If this is true, one would expect banks with higher levels of nontraditional activities to exhibit less overall risk as their earnings are more diversified.

Two alternative proxies are used to measure bank risk. The first looks at equity capital (CAPITAL RISK) as a cushion to absorb losses in the market value of assets and to guard against insolvency. This variable measures the ratio of total equity to total assets. To the extent that the financial markets and bank regulators require assurance capital for banks to enter new activities in order to prevent banks from taking excessive risk, a positive relation should exist between fee income and CAPITAL RISK. Banks with high levels of capital have a greater capacity to absorb asset losses from nontraditional activities.

Another uncertainty faced by a bank is credit risk. If borrowers default on loans, the market value of a bank's assets decline, reflecting lower assets quality. We include the

ratio of non-performing loans to total gross loans (CREDIT RISK) in the regression model since it reflects bank management's view of their changing exposure to credit risk as well as loans quality. Negative relationship between credit risk measured by CREDIT RISK and FEE implies that banks with high involvement in nontraditional activities are less risky.

#### 4. Findings

First, the basic descriptive statistics of the variables are presented in this section. Table 2 reports the descriptive statistics based on common sample. The dependent and independent variables are tested for multicollinearity based on a simple correlation matrix. As depicted in Table 3, all of them have no collinearity problems.

**TABLE 2. Descriptive Statistics.**

Variables	Mean	Std. Dev.	Skewness	Kurtosis	Jarque-Bera
FEE	0.0097	0.0676	9.8360	105.5649	64984.77
ASSET	13.2318	1.8452	-0.2222	2.1451	5.5320
NIM	0.0175	0.0266	2.1045	14.8097	936.5628
DEPOSIT	26.4824	152.0667	5.7319	33.8809	6465.066
CAPITAL RISK	0.0894	0.0824	2.2637	9.1790	349.6111
CREDIT RISK	0.0465	0.0675	2.1466	8.1298	266.6082

Note: Jarque-Bera statistics are significant between 1% to 10%.

**TABLE 3. Correlation Matrix.**

Variables	ASSET	NIM	DEPOSIT	CAPITAL RISK	CREDIT RISK
ASSET	1.0000				
NIM	0.0612	1.0000			
DEPOSIT	-0.0760	-0.0139	1.0000		
CAPITAL RISK	-0.4335	0.0166	-0.0308	1.0000	
CREDIT RISK	0.3793	-0.0836	-0.0975	-0.1616	1.0000

Note: Correlation matrix based on common sample.

Next, the regression results of panel data are reported in Table 4. The dependent variable (FEE) is the ratio of fee income to total assets. Model 1 and Model 2 correspond to cross-section fixed effects *i.e.* least-square-dummy-variables (LSDV) or fixed effects and cross-section random effect models respectively.<sup>(5)</sup> The models are estimated using a panel of 143 observations for the period 1994 to 2004 derived from 21 Islamic banks. The estimated coefficients are also assigned for the *ith* banks with the aim of capturing the influence of specific characteristics of each individual bank. Teets and Wasley (1996) suggested that the failure to use a bank-specific specification may yield incorrect inference about the magnitudes of the regression coefficients and/or differences in regression coefficients across groups of banks when there is a need to consider possible heterogeneity in the regression coefficients. We also employed robust covariance estimators based on White Cross-Section to control for heteroscedasticity across cross-sections.

(5) Since the errors are expected to be correlated, we used panel estimates generalized least squares (EGLS) in order to get efficient estimates.

**Table 4. Panel Regression Results.**

Explanatory Variables	Model 1: Cross-Section Fixed Effects	Model 2: Cross-Section Random Effects
C	-0.0635 (0.0501)	-0.0222* (0.0141)
ASSET	0.0047 (0.0037)	0.0017** (0.0010)
NIM	0.0123 (0.0335)	0.0105 (0.0160)
DEPOSIT	0.0003** (0.0002)	0.0003** (0.0002)
CAPITAL RISK	0.0443* (0.0325)	0.0151* (0.0134)
CREDIT RISK	-0.04946* (0.0310)	-0.0211** (0.0112)
N x T = 21 x 11	143 (unbalanced)	143 (unbalanced)
R <sup>2</sup>	0.5417	0.5389
Adj. R <sup>2</sup>	0.4438	0.5221
F-Stat.	5.5321***	32.0221***
Durbin-Watson Stat.	2.1012	2.0885

Notes: Values in parentheses are the *standard errors*. \*\*\*, \*\* and \* denote significant level at 1%, 5% and 10% respectively. The Durbin-Watson statistics for both models do not indicate the existence of positive first-order serial correlation at 5% level of significance.

Then, we extended the regression results in order to select which model is better; fixed effects or random effects model. A central assumption in random effects estimation is the assumption that the random effects are uncorrelated with the explanatory variables. One common method for testing this assumption is to employ a Hausman (1978) test to compare the fixed and random effects estimates of coefficients (for discussion see, for example Baltagi, 2001 and Wooldridge, 2003). The intention is to find out whether there is a significant correlation between the unobserved individual-specific random effects ( $\alpha_i$ ) and the regressors. The result of Hausman test based on chi-squared statistic as reported in Table 5 suggest that the corresponding effects are statistically insignificant, hence fail to reject  $H_0$ . The conclusion of the test is that random effects model is appropriate.<sup>(6)</sup> The arguments in favor of the model are that the LSDV method or fixed effects model often results in a loss in large number of degrees of freedom and it also eliminates a large portion of the total variation. Furthermore, this study want to make inferences about the population from which these cross-section (banks) data came, therefore we should treat  $\alpha_i$  as random.

**Table 5. Hausman Test for Correlated Random Effects.**

Test cross-section random effects	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.642232	5	0.9860

$H_0$ :  $\alpha_i$  are uncorrelated with  $X_{it}$ .

$H_1$ :  $\alpha_i$  are correlated with  $X_{it}$ .

(6) Since Hausman test is also one of the specification test, this result also indicates that there is no misspecification, *i.e.* fixed effects model and random effects model do not differ.



Finally, the analysis of the regression results is as follows. In both models, the result for deposit, capital risk and credit risk reveal consistent signs and significant relationship with FEE. However, further analysis will be based on random effects model (Table 4, 3<sup>rd</sup> column).

Asset plays a critical component of our model since it permits us to interpret the other variables after controlling for bank size. The result for ASSET reveals a positive and significant relationship with FEE. This finding suggests that a larger bank is able to generate more fee-income as a result of their ability to utilize the new technology and exploit the resulting cost savings and/or efficiency gains.

No significant relationship between net income margin (NIM) and fee income can be appreciated in this study. Based on this result, no conclusion can be made regarding the impact of diversification of earnings via nontraditional activities on Islamic banks' traditional income.

For core deposits, a positive and significant relationship with FEE comes to light: banks with higher level of FEE are associated with substantially higher core deposits. The positive relationship implies that Islamic banks with traditional sources of funds are associated with more nontraditional activities as sources of income. After controlling for bank size, a bank with huge core deposits strongly suggests that it will be engaged in more fee-generating activities.

Subsequently, both measures of risk suggest a different relationship between bank risk and FEE. For risk measured by capital, banks involved in higher levels of nontraditional activities have larger capital ratios, allowing greater capacity to absorb asset losses from the activities. Negative relationship between credit risk measured by non-performing loans and FEE implies that banks with high involvement in nontraditional activities are less risky. Collectively, these results suggest that nontraditional activities tend to be safer.

As a final point, with regard to nontraditional activities, bank-specific characteristics used in the model estimation help to explain the heterogeneity among Malaysian Islamic commercial banks.

## 5. Conclusion

In recent years, banking worldwide is described as losing their traditional business of offering loans and accepting deposits. In order to survive banks are suggested to move from traditional to nontraditional activities of fee income. This paper analyzes a bank's choice of nontraditional activities to determine the characteristics that banks with greater amounts of these activities might have in common. As our results show, after controlling for bank size, banks with higher level of nontraditional activities tend to have higher assets and core deposits, as well as exhibit less risk. Since the findings suggest that banks with a greater involvement in nontraditional activities must resort to alternative sources of funds to finance their operations, nontraditional activities appear to be one method a bank can use to generate income. Furthermore, institutions engaged in such activities tend, to a larger extent, to be safer. With special reference to Islamic bank-specific characteristics, contracts like *kafalah*, *amanah*, *wakalah* and *ju'alah* that are currently underutilized, but have great potential to be developed further. Given the

significance of these contracts in providing banking services, it is important that these contracts are further developed, recognized, and operationalized to fully exploit the capabilities of Islamic banks worldwide.<sup>(7)</sup> Therefore, the underutilized fee income plays an important alternative source of revenue, hence able to reduce the over-dependence of Islamic banks on debt-financing as main source of revenue.

### References

- Allen, F. and Santomero, A.M.** (2001) "What do financial intermediaries do?" *Journal of Banking & Finance*, **25**: 271-294.
- Avery, R.B. and Berger, A.N.** (1991) "Loan commitments and bank risk exposure", *Journal of Banking & Finance*, **15**: 173-192.
- Ayoub, M.** (2002) *Islamic banking and finance: theory and practice*. Karachi: State Bank of Pakistan.
- Baltagi, B.H.** (2001) *Econometric analysis of panel data*. Ed. ke-2. England: John Wiley & Son.
- Bank Negara Malaysia** (2004), *Islamic banking* [www.bnm.gov.my](http://www.bnm.gov.my) (8 August 2005).
- Boot, A.W.A. and Thakor, A.V.** (1991) Off-balance sheet liabilities, deposit insurance and capital regulation. *Journal of Banking & Finance*, **15**: 825-846.
- Demircuc-Kunt, A. and Huizinga, H.** (1998) "Determinants of commercial bank interest margins and profitability: Some international evidence", *Policy Research Working Paper WPS 1900, March*. The World Bank Development Research Group. Washington D.C.: World Bank.
- Demircuc-Kunt, A. and Huizinga, H.** (2000) "Financial structure and bank profitability", *World Bank Working Papers No. 2430*. <http://www.econ.worldbank.org/docs/1185.pdf> [Accessed 16.5.2004].
- Demircuc-Kunt, A., Laeven, L. and Levine, R.** (2003) "The impact of bank regulations, concentration and institutions on bank margins", *Policy Research Working Paper, 3030, April*. The World Bank Development Research Group. Washington D.C.: World Bank.
- Hassan, M.K.** (1992) "An empirical analysis of bank standby letters of credit risk", *Review of Financial Economics*, **2**: 31-44.
- Hassan, M.K.** (1993) "The off-balance sheet banking risk of large U.S. commercial banks", *The Quarterly Review of Economics and Finance*, **33**: 51-69.
- Hassan, M.K. and Sackley, W.H.** (1994) "A Methodological investigation of risk exposure of bank off-balance sheet loan commitment activities", *The Quarterly Review of Economics and Finance*, **34**: 283-299.
- Hassan, M.K. and Bashir, A.H.M.** (2003) "Determinants of Islamic banking profitability", *International Seminar on Islamic Wealth Creation. University of Durham, UK, 7-9 July*.
- Hausman, J.A.** (1978) Specification tests in econometrics. *Econometrica*, **46**: 1251-1272.
- Hunter, W.C. and Timme, S.G.** (1986) "Technical change, organizational form, and the structure of bank production" *Journal of Money, Credit and Banking*, **18**: 152-156.
- Iqbal, Zamir** (2004) "Financial intermediation and design of financial system in Islam" *International Seminar on Macroeconomic from Islamic Perspective: Theory and Contemporary Issues. Renaissance Hotel, Kuala Lumpur, 22-24 September*.
- Merton, R.C. and Bodie, Z.** (1992) "On the management of financial guarantees", *Financial Management*, **21**: 87-109.
- Moshirian, F. and Van der Laan, A.** (1998) "Trade in financial services and determinants of banks' foreign assets", *Journal of Multinational Financial Management*, **8**: 23-38.
- Rogers, K. and Sinkey, J.F. Jr.** (1999) "An analysis of nontraditional activities at U.S. commercial banks", *Review of Financial Economics*, **8**: 25-39.
- Teets, W. and Wasley, C.** (1996) "Estimating earnings coefficients: Polled versus bank-specific model", *Journal of Accounting and Economics*, **21**: 279-295.
- Wooldridge, J.M.** (2003) *Introductory econometrics: a modern approach*, United States: Thomson.

(7) With the latest development in Malaysian Islamic banking landscape, where the increase in the number of full-fledged banks together with Islamic bank subsidiaries instead of windows-based in the ongoing parallel system, Islamic banks can perform the role of 'wholesale bank' which comprise both commercial and investment banking.

## Appendix

### (1)

#### Fee-based Islamic Banking Contracts

- a. *Al-Kafalah*: In Islamic law, *kafalah* is the creation of an additional liability with regard to the claim, not to the debt (Ayoub 2002). Bank Negara Malaysia (2004) defines the concept as guarantee provided by a person to the owner of goods, who had placed or deposited his goods with a third party, whereby the guarantor and the third party must meet any subsequent claim by the owner for his goods. In other words, the third party becomes surety for the payment of a debt or obligation, if unmet by the person originally liable. It is similar to a pledge given to a creditor that the debtor will pay the debt, fine or any other liability (Iqbal 2004). The contract of *kafalah* is capable of becoming the basis of more sophisticated vehicle for a financial intermediary to undertake financial and performance guarantees and underwriting of financial claims, which are integral parts of modern banking and capital markets.
- b. *Al-Wakalah*: According to Bank Negara Malaysia (2004) *wakalah* refers to a situation, where a person nominates another person to act on his behalf. *Wakalah* contract gives a power of attorney or an agency assignment to a financial intermediary to perform a certain task. By this contract, financial intermediary becomes representative of capital owner who is able to direct the management of investment more closely. For example, on the liabilities side, bank can offer general custodial services for consumers and corporate in return for fee income.
- c. *Al-Hiwalah*: Refers to a transfer of funds/debts *i.e.* remittance from depositor's/debtor's account to the receiver's/creditor's account whereby a commission may be charged for such service.
- d. *Al-Ujr*: Refers to commissions or fees charged for services provided by bank.

The abovementioned Islamic banking concepts are further developed as underlying contracts of wide range of products and services offered by Malaysian Islamic banking as illustrated in Table-A.

## (2)

**TABLE-A. Range of Fee-based Islamic Banking Products and Services in Malaysia.**

<b>Products/Services</b>	<b>Applicable Concepts</b>
<b>Financing:</b>	
Hire purchase agency-i	<i>Wakalah</i>
Revolving credit facility-i	<i>Hiwalah</i>
<b>Trade Financing:</b>	
Bank guarantee-i	<i>Kafalah</i>
Shipping guarantee-i	<i>Kafalah</i>
Letter of credit-i	<i>Wakalah</i>
Trust receipt-i	<i>Wakalah</i>
<b>Treasury/Money Market Investment:</b>	
Foreign exchange	<i>Ujr</i>
<b>Card Services:</b>	
Debit card-i	<i>Ujr</i>
<b>Banking Services:</b>	
ATM Service	<i>Ujr</i>
Cashiers' Order	<i>Ujr</i>
Demand Draft	<i>Ujr</i>
Standing Instruction	<i>Ujr</i>
Stock Broking Services	<i>Ujr</i>
Telegraphic Transfer/Fund Transfer	<i>Ujr</i>
Travelers' Cheques	<i>Ujr</i>
Telebanking	<i>Ujr</i>

Source: Bank Negara Malaysia, (2004).

## تحليل البيانات الإحصائية لأنشطة البنوك الإسلامية المدرجة للعمليات

شاهدة بنت شاهيمي

محاضر مساعد في الاقتصاد الإسلامي والبنوك والتمويل

عبدالغفار إسماعيل

أستاذ البنوك والتمويل

سانب أحمد

محاضر في الاقتصاد الإسلامي والإحصاء الاقتصادي

كلية الاقتصاد - جامعة كيبانجسان ماليزيا

**المستخلص:** في غضون السنين الأخيرة انخفض المستوى التقليدي لحجم الودائع لدى البنوك التجارية وكذلك القروض الممنوحة، كظاهرة عالمية ملحوظة. وفي نفس الوقت اتجهت أنظار البنوك التجارية نحو النشاطات المالية غير التقليدية. نتيجة لذلك، ارتفعت إيرادات الخدمات المالية غير التقليدية مقارنة بالخدمات التقليدية. ويهدف هذا البحث إلى إجراء دراسة إحصائية عن نشاطات البنوك المدرجة للعمليات.

تقوم الدراسة الإحصائية على فرضيات حول العلاقة بين العمليات الإيرادية التي تحصل عليها البنوك وحجم الأصول والربحية والودائع الأساسية ومخاطر رأس المال ومخاطر الائتمان. وقد تم اختبار هذه الفرضيات إحصائياً باستخدام بيانات عن بنوك معينة مستقاة من مجموعة من البنوك الإسلامية في ماليزيا خلال الأعوام ١٩٩٤ - ٢٠٠٤م.

وقد أظهرت نتائج الاختبار الإحصائي علاقة موجبة بين مستوى النشاطات المدرجة للعوائد وحجم الأصول والودائع الأساسية وعلاقة سالبة مع مستوى المخاطر.

وتوحي هذه النتائج بأن البنوك التي تقدم خدمات غير تقليدية تتميز بتنوع مواردها المالية وقدرة أكبر على استقطاب هذه الموارد مما يخفض من مستوى المخاطر لديها. هذه الميزة تشكل رافداً مهماً لهذه البنوك في توليد عوائد إضافية، في نفس الوقت الذي تستطيع أن تخفض من مستوى تعرضها للمخاطر. من هذا المنطلق يمكن القول إن هذه المصادر غير التقليدية المولدة للعمليات الإيرادية، يمكن أن تشكل مورداً مالياً، وإن كان لا يزال متواضعاً، إلا أنه في تزايد من حيث الأهمية مقارنة بالمصادر التقليدية، ويمكن الاعتماد عليه في التحرر من قبضة الاعتماد المفرط على النشاطات التقليدية وأهمها الإقراض.