

THE EXISTENCE OF CONVENTIONAL BANKING PROFITABILITY THEORIES IN THE ISLAMIC BANKING SYSTEM

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ABSTRACT

This study verifies the existence of profitability theories applied to conventional banks in Islamic banking. With some adjustments to Bourke's methodology, we find that determinants such as capital ratio, liquidity, interest rate and money supply have a similar effect on Islamic banks. There are also differences which could be used as evidence that Islamic banks are, in fact, distinct from conventional banks. Support is found for the risk-aversion theory and no evidence is found for the efficient-structure and expense-preference theories.

ABSTRAK

Penyelidikan ini mengkaji aplikasi teori-teori keberuntungan yang diamalkan oleh bank-bank konvensional kepada bank-bank berteraskan perbankan Islam. Berdasarkan kepada kaedah Bourke, penentu-penentu seperti nisbah modal, kecairan, kadar faedah dan penawaran wang didapati mempunyai kesan yang sama kepada bank-bank Islam. Namun, terdapat beberapa perbezaan yang menunjukkan bahawa bank-bank Islam adalah unik daripada bank-bank konvensional. Hasil kajian ini menyokong teori pengelakan risiko tetapi tiada bukti sokongan bagi teori struktur kecekapan dan teori kecenderungan perbelanjaan.

INTRODUCTION

In the last three decades many studies have been undertaken to determine the profitability determinants of conventional banks. The focus of these studies tends to be in one of the following four areas: structure-conduct-performance relationship theory, efficient-structure theory, expense-preference behaviour theory, and risk-aversion theory. These studies are not only confined to national boundaries but have been expanded using cross-country data. Most of the studies which use national data have been conducted in the United States. There have also been five major studies on international banks, i.e., Short (1979), Revell (1980), Bourke (1989), Molyneux and Thornton (1992), and Steinherr and Huveneers (1994). All of these studies, however, relate to conventional banks and there has been no similar study on Islamic banks to date.

Nowadays, Islamic banks have managed to position themselves (especially, in Muslim countries) as an additional financial institution which offers banking facilities similar to conventional banks. It is worth exploring whether the profitability determinants of conventional banks have a similar impact on Islamic banks. This study will also examine the existence of expense-preference and risk-aversion theories in Islamic banking. This paper is divided into four sections. Following this introduction, Section 2 explains the techniques used in examining the existence of profitability theories in Islamic banking system. Section 3 elaborates on the results, while Section 4 provides a conclusion. The words in italics in this paper are English representations of Arabic words widely used in Islamic banking literature.

COMPARISON TECHNIQUES

The data for this study is based on the 10 year financial statements, for the period 1985 to 1994, of 15 Islamic banks from Muslim countries such as Bahrain, Bangladesh, Iran, Jordan, Kuwait, Malaysia, Sudan, Tunisia, Turkey, and the United Arab Emirates. At present, there is only one fully-fledged Islamic bank operating in each of the countries of Bangladesh, Jordan, Kuwait, Malaysia and the United Arab Emirates. However, in Bahrain, Sudan and Turkey there are numerous Islamic banks.

Since the data is from various countries, it is appropriate to observe and duplicate (with some modifications) the methods used by Bourke (1989). Using multiple regression analysis, Bourke (1989) examined the relationship between profitability and various independent variables such as staff expenses, liquidity ratio, concentration ratio, government ownership, interest rate, market growth and inflation. The proxies for profitability are return on capital ratio, return on assets ratio and value added return on total assets. The value added concept

introduced by Bourke (1989) is a proxy that allows testing of the expense-preference theory and risk-aversion theory. The following ratios are used as dependent variables:

1. Net profit before tax as a percentage of capital and reserve (BTCR),
2. Net profit after tax as a percentage of capital and reserve (ATCR),
3. Net profit before tax as a percentage of total assets (BTTA),
4. Net profit before tax + staff expenses as a percentage of total assets (BTSETA),
5. Net profit before tax + staff expenses + provision for investment losses as a percentage of total assets (BTSEPLTA).

The first three dependent variables, i.e., BTCR, ATCR and BTTA, are proxies for profitability, whereas BTSETA is used to test the expense-preference theory and BTSEPLTA is used to test the existence of risk-aversion theory. Unlike Bourke (1989) who used another dependent variable called BTCRTB (net income before tax as a percentage of capital and reserves + total borrowing), as a proxy for subordinate loan stock which is frequently used as a substitution for equity capital, this variable is not applicable to Islamic banks. Islamic banks are prohibited from making or receiving loans unless they are free from any element of interest. The independent variables for this study then are as follows:

- MKTSH: Market share (the total deposits of an Islamic bank as a percentage of the country's total deposits),
- INT : The annual discount rate for each country (IMF),
- MON : The annual growth in money supply for each country (IMF),
- CPI : The percentage of increase in the consumer price index for each country for each year (IMF),
- CRTA: Capital and reserves as a percentage of total assets,
- LIQ : Total financing as a percentage of total deposits,
- SE : Staff expenses as a percentage of total assets.

Although government ownership is considered by Short (1979) and Bourke (1989) as one of the factors which has a direct influence on banks' profitability,

this factor will not be tested in this study. This is largely because almost all Islamic banks are privately owned banks. Similarly, the effect of concentration which is frequently used by many researchers to examine the existence of the structure-conduct-performance theory is omitted for two reasons. First, the parameters used in calculating the ratio are based on either the amount of deposits or on the assets owned by a number of the biggest banks in the market area. Since all Islamic banks in this study operate within the conventional banking system, the biggest banks in the market are usually the conventional banks. In addition, as Hassan (1993) suggests, Islamic banks should be considered as a different industry when compared to conventional banks. These two types of banks have different objectives, rely on different economically-based concepts and have different operations and organisations. The structure-conduct-performance theory, within which a concentration ratio is calculated based on the conventional system, is not applicable to Islamic banks since they are to be considered as industries by themselves. Second, instead of the concentration ratio, market share (MKTSH) is the most appropriate means for measuring the effect of market collusion between Islamic and conventional banks. The use of market share is not only in line with Smirlock's efficient structure hypothesis but also acknowledges that the Islamic banking system is a relatively new financial system (Smirlock, 1983 & 1985). Being new to the market, Islamic banks have to introduce various strategies and increase their efficiencies in order to capture the market share. Therefore, bigger share will mean more profit for Islamic banks.

As suggested by Short (1979), the discount rate (INT) is a genuine proxy for capital scarcity. High discount rates in a country would imply that it is facing capital scarcity and higher economy-wide profit rates. High discount rates could also lead to higher commercial bank profitability. When a central bank raises its discount rates, commercial banks may tend to increase their lending rates subsequently and make more profit on their lending activities. In the case of Islamic banks, however, it is expected that the movement of discount rates will have no effect on their profitability since they operate on an interest-free basis.

Money supply (MON) and the consumer price index (CPI) are indicators for growth and inflation figures in economies. While an increase in the money supply will have a multiplier effect and increase profitability, Revell (1980) claimed that inflation will also widen the cost-profit margin. It is assumed that wages and other non-interest costs will grow faster than the rate of inflation and in this case these costs will be measured by the CPI.

The capital ratio, liquidity ratio and staff expenses are considered as internal variables in determining a bank's profitability. The capital ratio (CRTA) is used to test Bourke's (1989) hypothesis that well capitalised banks enjoy access to cheaper sources of funds or that the prudence implied by high capital ratios is

maintained in the loan portfolio, with a consequent improvement in profit rates. In the case of liquidity (LIQ), banks with high liquidity will prevent themselves from long term investment opportunities and thus reduce their costs and expenses. Islamic banks are well known for having limited investment avenues. Staff expenses (SE) is a proxy to general overhead cost and it will have an adverse effect on profitability.

RESULTS

This study's findings are reported in Table 1 and Table 2. Table 1 replicates both Short's (1979) and Bourke's (1989) works on estimating the relationship between the return on capital and various independent variables. The findings indicate many similarities between the effect of independent variables on the return on capital of conventional banks and the return on capital for Islamic banks. Studies conducted on conventional banks indicated that both interest rates and money supply had a statistically significant positive relationship with the return on capital. Interestingly, it was also found that the interest rate (which is used as a capital scarcity proxy variable) and the money supply had a significant positive relationship with the profitability of Islamic banks. For market share, however, a mixed result was obtained. Market share had a significant positive relationship on profit after tax when the interest rates variable was included in the equation. Yet, when market share was the only variable in the equation, it produced different results.

The findings shown in Table 2 used the return to total assets ratio and again there were many similarities between the impact of independent variables on profitability for both conventional and Islamic banks. Bourke (1989), Molyneux and Thornton (1992) both found that capital ratios and interest rates were positively related to the profitability of conventional banks. The results of the present study also indicate that capital ratio (CRTA), interest rates (INT) and inflation (CPI) have a positive relationship with the profitability of Islamic banks. These findings indicate that any changes in interest rates and inflation rates will have a similar effect on both conventional and Islamic banks.

Unlike Molyneux and Thornton (1992), who found a weak negative relationship between liquidity and profitability, the present results indicate that liquidity has a weak positive effect on profitability in most of the equations. This finding is quite similar to Bourke's. There are two possible reasons for this occurrence. First, almost all Islamic banks concentrate on short term financing and have a very liquid portfolio. Secondly, Islamic banks in countries like, Kuwait, Malaysia, Pakistan and Sudan channel most of their funds into Islamic securities.

Table 1
Estimates of the relationship between return on capital and
selected independent variables

Variables	MKTSH	INT	MON	R ² (adj)	F
1. BTCR	0.1658 (0.876)	0.3507 ^a (2.253)	-0.0088 (-0.088)	0.137	5.029
2. BTCR	-0.3485 (-0.855)	-	-	-0.002	0.731
3. BTCR	0.1749 (0.416)	-	0.552 ^a (10.505)	0.481	55.887
4. ATCR	0.488a	0.433 ^a	-	0.422	28.72

t statistics in parentheses

a: Significant at 5 per cent level

The market share variable (MKTSH) had a negative relationship with profitability. It seems likely that the profit-loss sharing concept practised by Islamic banks is the reason for this phenomenon. Under this concept, more income generated by businesses will translate into more profit for the depositors. This finding contradicts the efficient-structure theory which says that market expansion will have a positive effect on profitability. In the case of staff expenses (SE), both Bourke, Molyneux and Thornton found in their studies that it had a positively significant relationship with profitability. In this study the relationship between staff expenses and profitability was positive but at the marginal level. As indicated by Bourke (1989), the basis for supporting the existence of expense-preference and risk-aversion theories is the relationship between value added variables (BTSETA and BTSEPLTA) and concentration. In this study, however, the indicator for the existence of these theories is based on the relationship between the value added variables and market share (MKTSH).

It had been postulated that the sign of the coefficient between concentration and the value added variables is the indicator for the existence of expense-preference theory and risk-aversion theory. A positive sign between concentration and BTSETA implies the existence of the expense-preference theory, while a positive sign between concentration and BTSEPLTA implies the non-existence of the risk-aversion theory. Using market share (MKTSH) as a measure of the concentration effect, a significant adverse relationship between this variable and BTSETA was found. This relationship implies the absence of the expense-preference theory, i.e., the bigger the market share, the less the staff expenses incurred by Islamic banks.

Estimates of the relationship between return on assets and selected independent variables

	CRTA	LIQ	MKTSH	INT	MON	CPI	SE	R ² (adj)	F
1. BITA	0.087 ^a (7.762)	0.003 (0.239)	-0.063 ^a (-1.679)	0.030a (1.785)	-	-	-	0.519	21.54
2. BITA	0.085 ^a (9.374)	0.008 (0.753)	-0.066 ^a (-1.882)	-	-	0.012 ^a (2.360)	-	0.543	26.67
3. BITA	0.074 ^a (9.357)	0.018 ^a (2.076)	-0.094 ^a (-3.153)	-	-	-	-	0.527	44.08
4. BITA	0.043 (1.162) ^b	0.015 ^a (0.967)	-	-	-	0.455 ^b	0.068 (1.543)	2.49	
5. BITA	0.081 ^a (10.05)	-	-	-	-	-	-	0.457	101.13
6. BTSETA	0.021 (0.848)	0.049 ^a (3.767)	-	-	-	-	-	0.167	7.12
7. BTSETA	0.037 ^a (1.929)	0.009 (0.085)	-0.108 ^a (-1.794)	-	0.039a (5.688)	-	-	0.537	18.40
8. BTSETA	0.033 ^a (1.774)	0.001 (0.101)	-0.111 ^a (-1.863)	-	0.000 (0.001)	0.041a (3.613)	-	0.612	18.03
9. BTSETA	0.018 (1.033)	-0.001 (-0.175)	-0.081 ^b (-1.579)	0.060 ^a (5.83)	-	-	-	0.580	15.20
10. BTSEPLTA	0.015 (0.271)	0.075 ^a	-	-	-	-	-	0.113	3.70
11. BTSEPLTA	0.013 (0.220)	0.062 ^a (1.923)	-0.117 (-0.657)	-	0.004 (0.193)	-	-	0.075	1.83
12. BTSEPLTA	0.012 (0.178)	0.055 ^b (1.450)	-0.142 (-0.679)	-	-0.025 (-0.570)	0.026 (0.737)	-	0.017	1.13
13. BTSEPLTA	0.007 (0.100)	0.047 (1.125)	-0.103 (-0.472)	0.005 (0.149)	-	-	-	-0.042	0.69

t statistics in parenthesis

a: Significant at 5 per cent level

b: Significant at 10 per cent level

This study found evidence to support the risk-aversion theory. The weak adverse relationship between market share and BTSEPLTA implies that higher levels of market share are associated with the less risky assets held by Islamic banks. This finding also confirms the current practices of all Islamic banks that adopt a very conventional approach in their financing and investment activities. Instead of using the principle of mudarabah and musyarakah (these two principles are based on the sharing of profits or losses) Islamic banks prefer to use principles that are based on mark-ups such as murabaha, bai mua'zzal and ijara. The selection of these mark-up principles is largely because of their simplicity, minimal risk, and pre-determined fixed rate of return.

CONCLUDING REMARKS

The main objective of this study was to examine whether some of the conventional bank profitability theories were applicable to Islamic banks. While some independent variables, such as capital ratio, liquidity, interest rates, and money supply had a similar impact on Islamic banks, there were differences which could be used as evidence that Islamic banks are, in fact, distinct from conventional banks. Interestingly, evidence was found to support the risk-aversion theory but the existence of the efficient-structure theory and the expense-preference theory in Islamic banks was difficult to prove.

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