The Profitability of Islamic and Conventional Banking in the GCC Countries: A Comparative Study

By

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Appendix

Table 3.1: Real GDP (Millions USD)

COUNTRY	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991
EMIRATES	n.a.*	n.a.	n.a	67,761.5	70,606.4	54,948.1	48,500.5	51,188.6	47,993.5	42,806.9	38,268.0	35,745.3	35,412.7	33,919.6
BAHRAIN	n.a.	9,606.3	8,448.0	7,936.2	7,970.7	6,619.7	6,183.5	6,348.4	6,101.1	5,848.4	5,566.0	5,200.5	4,750.8	4,616.2
SAUDI ARABIA	250,557.9	212,580.0	188,551.2	186,489.5	188,693.5	161,172.0	145,967.4	164,993.9	157,743.1	127,810.9	120,166.9	118,515.9	123,203.7	118,033.9
OMAN	n.a.	21,697.7	20,309.7	19,945.4	19,825.7	15,711.3	14,085.6	15,837.5	15,277.8	13,802.9	12,918.9	12,493.1	12,452.0	11,341.5
QATAR	n.a.	20,426	19,706.8	16,152.2	16,454.1	12,393.1	10,255.5	11,297.8	9,059.3	8,137.9	7,374.5	7,156.6	7,646.2	6,883.5
KUWAIT	n.a.	41,749.0	35,181.0	32,812.4	35,821.4	29,191.9	25,118.1	29,864.9	31,070.5	26,550.4	24,797.4	23,997.7	19,865.3	10,825.7

*n.a. = Not Applicable

Table 3.2: GDP Growth (%)

COUNTRY	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991
EMIRATES	n.a.*	n.a.	n.a.	-4.0	28.5	13.3	-5.3	6.7	12.1	11.9	7.1	0.9	4.4	0.8
BAHRAIN	n.a.	12	6	-0.4	20.4	7.1	-2.6	4.1	4.3	5.1	7.0	9.5	2.9	1.9
SAUDI ARABIA	15	11	1	-1.2	17.1	10.4	-11.5	4.6	23.4	6.4	1.4	-3.8	4.4	12.8
OMAN	n.a.	6	2	0.6	26.2	11.5	-11.1	3.7	10.7	6.8	3.4	0.3	9.8	-2.9
QATAR	n.a.	4	18	-1.8	32.8	20.8	-9.2	24.7	11.3	10.4	3.0	-6.4	11.1	-6.5
KUWAIT	n.a.	16	7	-8.4	22.7	16.2	-15.9	-3.9	17.0	7.1	3.3	20.8	83.5	-40.8

*n.a.= Not Applicable

Source: Adapted from Arab Monetary Fund www.amf.org

Table 3.3: GDP per Capita (USD)

COUNTRY	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991
EMIRATES	n.a.*	n.a.	n.a.	20,602	22,718	18,703	17,471	19,508	19,360	17,755	16,784	17,160	17,609	17,768
BAHRAIN	n.a.	13,262	11,915	11,115	11,569	9,954	9,632	10,206	10,168	10,101	9,975	9,666	9,154	9,087
SAUDI ARABIA	10,653	8,778	7,542	8,197	8,564	7,555	7,064	8,249	8,154	6,798	6,625	6,773	7,298	7,246
OMAN	n.a.	7,611	7,337	8,314	8,397	6,758	6,159	7,023	6,901	6,477	6,223	6,191	6,581	6,556
QATAR	n.a.	33,480	32,789	28,140	29,278	22,052	19,027	21,643	17,939	16,642	15,558	15,592	17,182	15,971
KUWAIT	n.a.	16,558	14,398	14,629	16,078	12,837	11,223	13,871	15,412	14,115	15,307	16,426	14,230	7,943

*n.a.= Not Applicable

Source: Adapted from Arab Monetary Fund www.amf.org

Table 3.4: Exports in the GCC (Millions USD)

COUNTRY	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991
EMIRATES	48,773.99	43,294.76	35,071.48	31,071.48	33,998.64	33,595.75	29,335.33	27,384.91	23,644.78	24,271.32	22,745.85
BAHRAIN	5,576.86	5,700.53	4,140.43	3,270.21	4,383.51	4,699.73	4,112.77	3,616.76	3,723.40	3,464.36	3,513.03
SAUDI ARABIA	67,793.33	77,584.25	50,756.74	38,821.90	60,732.44	60,728.44	50,040.85	42,614.15	42,395.19	50,287.05	47,696.66
OMAN	11,171.65	11,318.60	7,237.97	5,508.45	7,656.70	7,373.21	6,065.02	5,542.26	5,365.41	5,555.27	4,871.26
QATAR	10,870.05	11,593.96	7,213.74	5,030.49	3,855.99	3,832.99	3,557.01	3,146.37	3,245.41	3,840.71	3,209.81
KUWAIT	16,174.10	19,573.01	12,276.61	9,616.14	14,278.18	14,946.56	12,830.82	11,256.72	10,282.11	6,546.20	1,061.55

Table 3.5: Imports in GCC (Millions USD)

COUNTRY	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991
EMIRATES	35,550.00	31,926.48	30,673.93	30,524.17	26,603.13	25,832.20	23,481.34	22,688.64	19,613.18	17,433.94	13,919.91
BAHRAIN	4,409.00	4,611.70	3,697.61	3,566.22	4,025.53	4,272.87	3,715.69	3,747.87	3,857.98	4,263.03	4,115.16
SAUDI ARABIA	31,223.20	30,237.65	28,032.31	30,012.55	28,743.12	27,765.02	28,087.32	23,364.22	28,201.87	33,272.63	29,085.45
OMAN	5,399.13	5,039.53	4,673.86	5,681.40	5,026.01	4,577.63	4,248.37	3,914.43	4,113.91	3,769.05	3,194.02
QATAR	3,758.10	3,252.20	2,499.56	3,356.79	3,321.84	2,868.27	3,398.05	1,927.36	1,890.69	2,015.38	1,721.02
KUWAIT	7,870.75	7,619.23	7,616.00	8,615.98	8,245.09	8,373.98	7,782.48	6,681.45	7,049.12	7,259.46	4,679.46

Source: Adapted from Arab Monetary Fund Report (2005)

Chapter 5 – Data and Methodology

Introduction

This chapter addresses important bank characteristics that will be included in the regression models. The Ordinary Least Square method will used to identify how bank characteristics impact bank profitability. The adopted methodology examines the sensitivity of internal bank characteristics on profitability indicators. The profitability study is conducted on GCC Islamic banks and is compared to conventional banks. This chapter begins with Data Sample then moves on to Variable Definition, Model, and Data Variables, which is followed by graphs on ROA and ROE.

5.1 Data Sample

Data for this dissertation was obtained from financial statements in BankScope[1]. There are two types of banking operations in the GCC: Islamic and Conventional. The study of profitability compares sixteen Islamic banks to eighteen conventional banks.

The collected data examines profitability between 1997 and 2004. There are nine variables used in the regression. These variables are: Return on Asset (ROA), Return on Equity (ROE), Net Interest Margin (NIM), Total Asset (TA), Total Equity to Total Assets (TE/TA), Total Loans to Total Assets (TL/TA), Deposits to Total Assets, Total Expenses to Total Asset, and Non-Interest Expense to Total Expense. The variables will be explained in further detail in the next section.

[1] BankScope Database, London-Based International Bank Credit Analysis LTD (IBCA). 2005, CD-Rom.

5.2 Variable Definition

This section introduces and explains variables included in the regression analysis. There are a total of nine variables: three dependent variables and six independent variables. The three performance indicators - ROA, ROE and NIM - serve as dependent variables. The other internal bank characteristics - Total Assets, Total Equity, Loans, Deposits, Total Expenses, and Non-Interest Expense - serve as explanatory variables.

Dependent Variables

5.2.1 ROA

Return on Asset is a useful indicator of bank profitability. ROA is calculated by dividing net income and total assets giving a ratio of earnings generated from invested capital. ROA is management effective in generating profit on each dollar of investment (Hassoune, 2002). Heavy emphasis is put on ROA in the banking business as it precisely measures asset performance. Both Bashir-Hassan (2004) and Ben Naceur (2003) include ROA as a performance indicator and as dependent variables. ROA is the dependent variable in our study because it will help identify the effectiveness of bank assets.

5.2.2 ROE

Return on Equity indicates how much profit the bank has generated on money invested by shareholders. ROE is calculated by dividing net income by shareholders equity. ROE also determines how efficient the bank management uses shareholders' investments (Hassoune, 2002). Bashir and Hassan (2004) included ROE in their study. In addition, ROE is the dependent variable in our study of profitability because it will show how efficient the bank management uses shareholders' money.

5.2.3 NIM

Net interest margin is the difference between the interest income from the borrower and interest expense to the depositors expressed as a percentage of average earned assets. NIM is a simple formula that measures how profitable a bank is in terms of loans for conventional banks. However, Net Income Margin (NIM) for Islamic banks is profits from interest-free lending contracts. BankScope classifies NIM for Islamic banks as profit that is interest-free lending to make the data more consistent with other types of banks. Ben Naceur (2003) included NIM as a performance indicator. Consequently, NIM is included in the study of profitability because it determines the profitability of bank lending. NIM is a dependent variable when studying the profitability of GCC banks.

Independent Variables

5.2.4 Total Assets

Total Assets are company valuables including tangible assets such as equipment and property as well as intangible assets such as goodwill and patent. For banks, total assets predominantly include loans which are the basis for bank operations either through interest or interest-free practices. The total assets determine the size of a bank: higher total assets indicate bigger bank size. Goddard, Molyneux, and Wilson (2004) included total assets in their study of European bank profitability and found a positive significant relationship between total assets and profitability. Consequently, total assets are included in our study as an independent variable because it determines the importance of bank size. The total assets have been converted into logarithmic instead of dollars to be consistent with other ratios. The total assets are expected to have a positive relation with profitability because bigger banks seem to be more profitable.

5.2.5 Total Equity to Total Assets

Total equity over total asset measures bank capital adequacy. It indicates the ability of a bank to absorb losses and handle risk exposure with shareholders. Pervious studies have found a positive relationship between TE/TA and profitability (Hassan and Bashir, 2004). As a result, total equity to total assets is included in this study because it identifies bank capitalisation and the ability of a bank to handle losses with shareholders. Therefore, TE/TA is included as an independent variable to examine GCC banking profitability. TE/TA is expected to have a positive relation with performance because well capitalised banks are less risky and more profitable (Bourke, 1989).

5.2.6 Total Loans to Total Assets

Total loans over total assets measures the liquidity of bank assets tied to loans: the higher the TL/TA ratio, the less liquid the bank. Bank operations rely heavily on loans. Islamic banks, however, operate on a profit and loss basis which is interest-free lending. Moreover, previous studies on conventional banks found a positive relationship between TL/TA and profitability (Demirguc-Kunt and Huizinga, 1997). TL/TA is included in the study of profitability as an independent variable to compare the performance of interest loans and the interest-free lending. It is also expected to have a positive relation with profitability.

5.2.7 Deposits to Total Assets

The ratio of deposits to total assets is another liquidity indicator but is considered a liability. Deposits are included in this study because they measure the impact of liabilities on profitability. Deposits are also considered to be the main source of bank funding. Deposits are included as an independent variable, and can be compared to other ratios by dividing by total assets. Bashir and Hassan (2004) included deposits in their study and found a negative relation with profitability. It is therefore expected that deposits will have a negative relation with profitability.

5.2.8 Total Expenses to Total Assets

Total Expenses are like interest expenses in terms of conventional banks. Total expense is divided by total assets to convert it in to a ratio. It is included as an independent variable in the regression analysis. The ratio of total expenses to total assets is expected to have a negative impact on profitability. Therefore, total expenses over total assets are included in the study to examine the impact of expenses on bank profitability. Surprisingly, other studies such as Ben Naceur (2003) found a positive relation between profitability and total expenses.

5.2.9 Non-Interest Expense to Total Expense

Non-interest expenses to total expenses makes up all bank expenses excluding interest expense. Non-interest expense is divided by total expenses to show how interest expense affects total expense. This ratio basically represents overhead expenses. This ratio is included as an independent variable when comparing Islamic bank and conventional profitability. This ratio has not been included in previous profitability studies. Therefore, it is expected to have a positive relation with profitability given that overhead expenses contribute to bank activities.

5.3 Model

This study adapts a normal regression equation, Ordinary Least Square (OLS), to examine the profitability of Islamic banks and compares it to conventional banks in the GCC. There are three dependent variables - ROA, ROE, and NIM - that estimate the profitability of Islamic and conventional banking. The remaining variables are included as independent variables. The models are demonstrated below:

Model 1 - ROA

$$ROA_{bt} = \alpha_1 + \beta_1 \, Log\,(\text{Total Assets})_{bt} + \beta_2 \, \text{TE/TA}_{bt} + \beta_3 \, \text{TL/TA}_{bt} + \beta_4 \, \text{Deposits/TA}_{bt} + \beta_5 \, \text{Total Expenses/TA}_{bt} + \beta_6 \, \text{Non - Interest Expense/Total Expense}_{bt} + \varepsilon$$

Model 2 - ROE

$$ROE_{bt} = \alpha_2 + \beta_1 \, Log\,(\text{Total Assets})_{bt} + \beta_2 \, \text{TE/TA}_{bt} + \beta_3 \, \text{TL/TA}_{bt} + \beta_4 \, \text{Deposits/TA}_{bt} + \beta_5 \, \text{Total Expenses/TA}_{bt} + \beta_6 \, \text{Non - Interest Expense/Total Expense}_{bt} + \varepsilon$$

Model 3 - NIM

$$NIM_{bt} = \alpha_3 + \beta_1 \, Log\,(\text{Total Assets})_{bt} + \beta_2 \, \text{TE/TA}_{bt} + \beta_3 \, \text{TL/TA}_{bt} + \beta_4 \, \text{Deposits/TA}_{bt} + \beta_5 \, \text{Total Expenses/TA}_{bt} + \beta_6 \, \text{Non - Interest Expense/Total Expense}_{bt} + \varepsilon$$

Where:

ROA_{bt} represents the Return on Assets for bank *b* in year *t*,

ROE_{bt} represents the Return on Equity for bank *b* in year *t*,

NIM_{bt} represents the Net Income Margin for bank b in year *t*,

$\alpha_1, \alpha_2, \alpha_3$ represents alpha (constant) for each model respectively,

_i represents the coefficients of the regression equation,

Log $(\text{Total Assets})_{bt}$ represent the logarithmic of total assets of bank b in year t

TE/TA_{bt} represents Total Equity to Total Asset for bank b in year t,

TL/TA_{bt} represents Total Loans to Total Assets for bank b in year t,

Deposits/TA_{bt} represents Deposits to Total Assets for bank b in year t,

$\text{Total Expense/TA}_{bt}$ represents Total expenses to Total Assets for bank b in year t

$\text{Non-Interest Expense/Total Expense}_{bt}$ for bank b in year t,

and, _= is an error term

5.4 Data and Variables

This section addresses some descriptive statistics on the variables discussed in section 5.2. Examples of some of the descriptive statistics shown are mean, median, maximum, minimum, and standard deviation. Table 5.1 shows statistics for the entire sample combining Islamic and conventional banks. Statistics are then presented separately for conventional and Islamic banks.

The tables show facts on Islamic and conventional banking in the GCC. The size of conventional banking in the GCC appears to be greater or nearly double the size of Islamic banking according to total assets. ROA appears to be higher for Islamic banks and ROE is higher for conventional banks.

Moreover, the mean of NIM for conventional banking is higher at 3.11 percent compared to 2.82 percent for Islamic banks. Furthermore, deposits, total expenses, and non-interest expense are greater for conventional banking and are nearly double the size of Islamic banking. In addition, Total Equity over Total Assets (TE/TA) the capital indicator is higher for Islamic banks, which means that they are better capitalised. Finally, Total Loans over Total Assets (TL/TA), the liquidity indicator, is higher for Islamic banks in the GCC, which means that conventional banks are more liquid.

Finally, Islamic banking statistics express high standard deviations for all the variables. This indicates that there is higher divergence in Islamic banking variables. However, expenses in Islamic banks expressed lower standard deviations compared to conventional banks, which indicates that they have more stable expenses.

Table 5.1: Descriptive Statistics

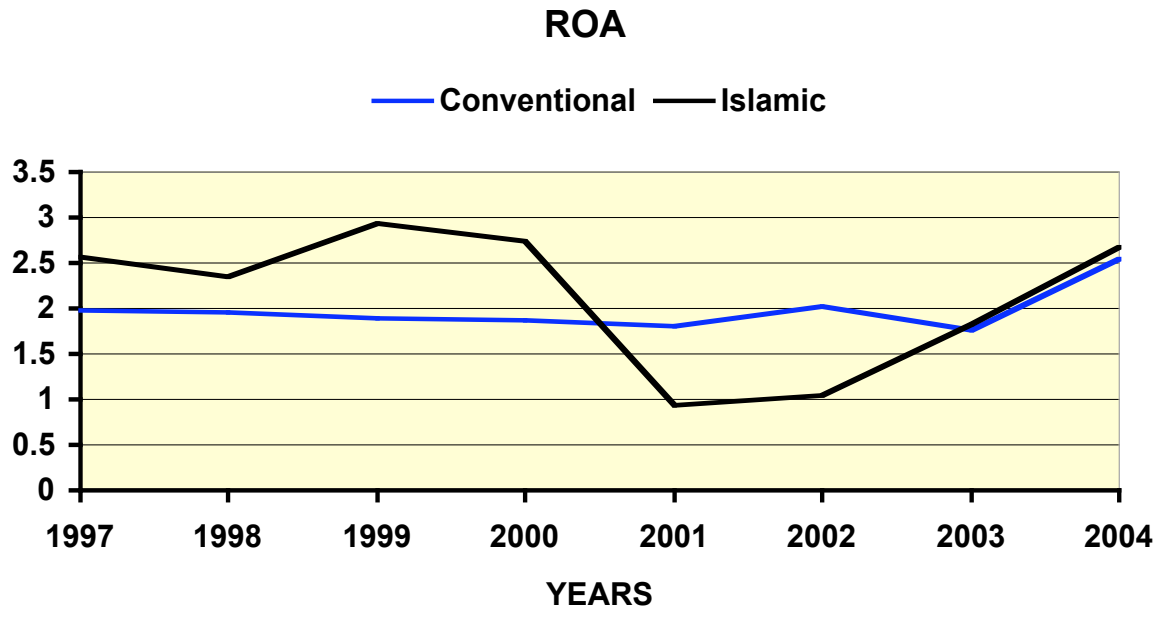
Variable	Std Dev*	Mean	Minimum	Quartile 1	Median	Quartile 3	Maximum
Entire Sample (Conventional and Islamic Banks)							
ROA %	2.00	2.04	-8.43	1.355	1.95	2.525	10.665
ROE %	7.76	15.37	-137.42	10.43	15.765	22.335	95.44
Total Assets $	6,276,876	5,226,697	184,241	1,098,720	2,340,848	7,443,798	25,428,499
TE/TA %	18.49	12.245	1.555	9.485	12.015	18.885	59.355
TL/TA %	20.90	57.335	14.86	37.04	54.955	71.295	84.505
NIM %	1.11	2.97	-0.34	2.22	2.82	3.82	6.19
Deposits $	5,265,555	4,375,250	125,866	881,520	2,334,544	6,056,884	21,168,645
Total Expense $	300,024	232,957	6,158	59,304	134,399	295,091	1,469,150
Non-Interest Exp	129,433	103,844	1,292	28,186	55,097	137,184	648,662
Conventional							
ROA %	0.71	1.97	-6.06	1.58	2.15	2.52	3.66
ROE %	6.43	16.97	-53.62	13.58	18.01	21.8	38.07
Total Assets	7,176,830	6,574,361	286,648	1,689,331	3,338,238	8,977,483	30,068,000
TE/TA %	2.77	11.85	6.34	9.91	11.23	13.81	20.68
TL/TA %	12.68	54.63	28.35	44.11	52.97	65.71	79.12
NIM %	0.90	3.11	0.58	2.485	2.98	3.73	5.6
Deposits	5,950,663	5,649,111	251,731	1,381,535	3,599,519	7,255,743	25,081,000
Total Expense	360,292	313,903	8,516	94,306	201,052	338,298	1,939,000
Non-Interest Exp	136,947	129,346	5,852	40,679	75,342	177,291	695,000
Islamic							
ROA %	2.82	2.11	-10.8	1.13	1.75	2.53	17.67
ROE %	8.88	13.77	-221.22	7.28	13.52	22.87	152.81
Total Assets	4,716,099	3,879,033	81,833	508,108	1,343,458	5,910,113	20,788,998
TE/TA %	25.50	12.64	-3.23	9.06	12.8	23.96	98.03
TL/TA %	27.35	60.04	1.37	29.97	56.94	76.88	89.89
NIM %	1.32	2.82	-1.26	1.96	2.66	3.9	6.77
Deposits	3,804,094	3,101,388	-	381,505	1,069,569	4,858,025	17,256,289
Total Expense	176,774	152,011	3,800	24,302	67,746	251,883	999,300
Non-Interest Exp	114,934	78,342	-3,268	15,693	34,851	97,076	602,323

**Standard Deviation*

Source: Constructed by Author Using Data from BankScope

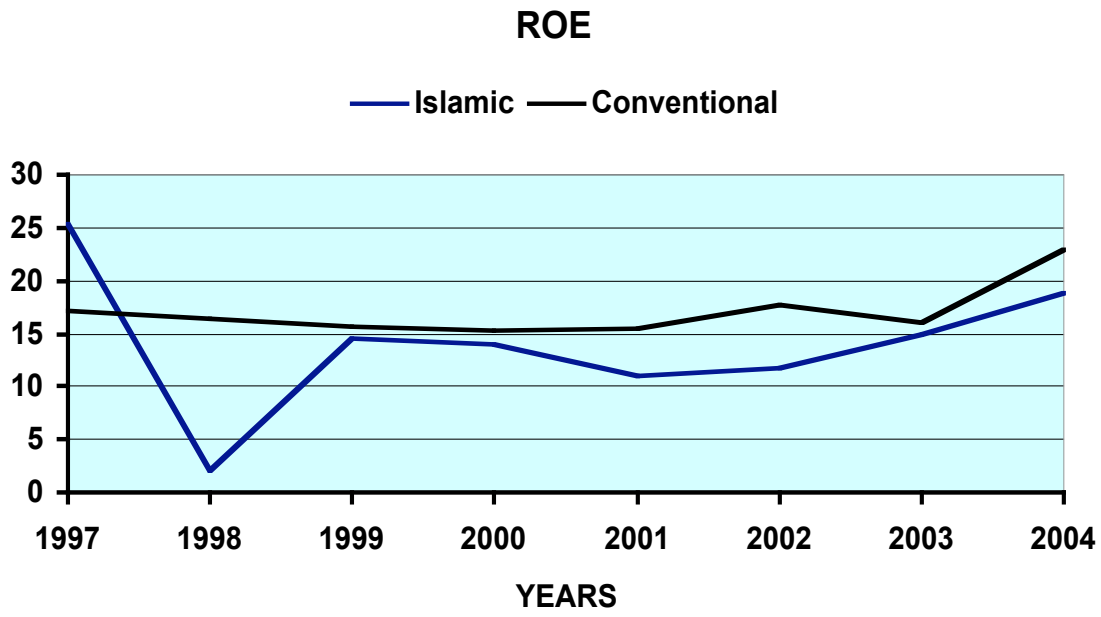
Graph 5.1 on the next page shows ROA for Islamic and conventional banks. The graph expresses ROA performance between 1997 and 2004. There is a sharp drop in 2000 for Islamic banks ROA. The ROE in Graph 5.2 gives an indication of Islamic and conventional bank performance between 1997 and 2004. This graph also shows a sharp drop in ROE for Islamic banks between 1997 and 1998. Overall graphs suggest that ROA and ROE are volatile for Islamic banks, which contradicts the Hassoune (2002) findings that assumed stable returns.

Graph5.1: Islamic and Conventional Bank ROA



Source: Constructed by Author Using Data from BankScope

Graph 5.2: Islamic and Conventional bank ROE



Source: Constructed by Author Using Data from BankScope

Conclusion:

This chapter discussed variables that are included in the regression analysis. As mentioned previously, all data was extracted from BankScope for the period 1997 to 2004. The model was introduced and indicated that normal regression is conducted. According to descriptive statistics, conventional banking has higher figures compared to Islamic banks.

The next chapter addresses results and findings in this dissertation. There is a ratio comparison between Islamic and conventional banks. This is followed with a correlation analysis to identify the relation between bank characteristics. Finally, the results will be examined where there are three models for each type of banking.

Chapter 6 – Findings and Results

Introduction

This chapter presents the results on the determinants of profitability for GCC banks between 1997 and 2004. However, this chapter begins with a detailed ratio comparison between Islamic and conventional banks. The ratio comparison outlines different categories such as asset quality, capitalisation, operation, and liquidity. There is a table of ratios to illustrate numerically the ratio comparison. This chapter then introduces a correlation analysis on the variables. The correlation analysis tests the relations among bank characteristics. This is followed by the regression output. In the regression there are three dependent variables: ROA, ROE, and NIM, according to the model. The regression tests bank determinants of profitability influence on the dependent variables. Moreover, the study of profitability compares Islamic and conventional banking to identify strengths and weakness. As there are similarities between GCC banking, the regression analysis deduces the GCC as one country. There are three parts to the correlation analysis and regression output sections. The first part presents the variables combined on Islamic and conventional banks. The second part presents variables on conventional banks. The third part presents variables on Islamic banks.

6.1 Islamic and Conventional Banking Ratio Comparison

This section compares some ratios for Islamic and Conventional banks in the Gulf Cooperation Council (GCC). Table 6.1 compares the two types of banking with the use of important performance measures. There are sixteen Islamic banks and eighteen conventional banks included in the ratio comparison. The banks operate in the GCC side by side and are similar in size. Values for each ratio are average percentages for the period 1997 to 2004. There are four parts to the ratio table: asset quality, capital, operations and liquidity.

Table 6.1: Islamic and Conventional Bank Ratios% (1997-2004)

Ratios (%)	Islamic Banks	Conventional Bank
Asset Quality		
Loan Loss Reserve / Gross Loans	6.27	5.37
Loan Loss Prov / Net Int Rev	9.59	13.55
Loan Loss Res / Impaired Loans	81.75	97.44
Impaired Loans / Gross Loans	6.17	4.92
NCO / Average Gross Loans	0.25	0.19
NCO / Net Inc Bef Ln Lss Prov	6.75	4.01
Capital		
Equity / Total Assets	12.64	11.53
Equity / Net Loans	27.49	22.06
Equity / Dep & ST Funding	14.64	14.00
Equity / Liabilities	14.18	13.06
Cap Funds / Tot Assets	14.43	11.51
Cap Funds / Net Loans	43.09	20.53
Cap Funds / Dep & ST Funding	19.46	14.31
Capital Funds / Liabilities	14.29	13.14
Operations		
Net Interest Margin	2.77	3.14
Net Int Rev / Avg Assets	2.54	2.98
Oth Op Inc / Avg Assets	1.10	1.15
Non Int Exp / Avg Assets	2.22	1.96
Return on Assets (ROA)	2.13	1.97
Return on Equity (ROE)	14.65	16.93
Dividend Pay-Out	55.32	53.34
Non Op Items / Net Income	3.12	4.84
Cost to Income Ratio	45.15	39.76
Recurring Earning Power	2.38	2.62
Liquidity		
Interbank Ratio	137.44	116.41
Net Loans / Total Assets	60.04	52.92
Net Loans / Customer & ST Funding	81.74	63.52
Net Loans / Tot Dep & Borrowing	72.34	60.81
Liquid Assets / Cust & ST Funding	19.22	31.55
Liquid Assets / Tot Dep & Borrowing	29.68	30.70

Source: BanckScope

6.1.1 Asset Quality

Asset quality analysis involves taking account of the likelihood of borrowers paying back loans. The first ratio, *loan loss reserves over gross loans*, measures the amount of total portfolio that has been provided for but not charged off. In our case, GCC conventional banks have a better loan portfolio since they have a lower ratio. The next ratio, *loan loss provision over net interest revenue,* measures the relation between provisions and interest income. This ratio should be as low as possible and in the GCC it is lower for Islamic banks. The following ratio, *loan loss reserves over impaired loans,* measures loan loss reserve in relation to non-performing loans. It is higher for conventional banks in the GCC, meaning that they have a better asset quality in terms of loan loss provision. The next ratio, *impaired loans over gross income,* measures loans that may default where it is lower and better for conventional banks. *Net Charge Off (NCO) / gross loans* measures the percentage of gross loans that have been written off from loan loss reserves where conventional banks have a better ratio. Finally, *NCO / net income before loan loss provisions* measures the ratio of charge offs against income which should be low. Again, conventional banks demonstrate a lower ratio compared to Islamic banks. In summary, conventional banks appear to have better asset quality compared to Islamic banks.

6.1.2 Capital

The second entry in Table 6.1 compares Capital adequacy for Islamic and conventional banks. Capital adequacy measures the capability for a bank to absorb losses giving a historic figure. The banking supervisory board, *Basle*, uses capital ratios to quantify the bank's ability to handle risk exposure. In many cases, the Basle Committee encourages banks to maintain an eight percent capital-asset ratio. In the GCC, both Islamic and conventional banking maintain a capital-asset ratio that is above eight percent and this ratio is higher for Islamic banks. Bashir and Hassan (2004) also found that Islamic banks have a higher capital-asset ratio but it was for a different sample.

The first capital ratio, *equity to total assets,* measures the ability of a bank to handle losses with shareholders. Islamic banks appear to have a higher equity ratio. The second ratio, *equity over net loans,* quantifies the equity cushion available to withstand losses on the loan book. The third ratio, *equity over short-term funding,* measures the amount of permanent funding compared to short-term funding which should be higher for stable banks. *Equity over liabilities* measures equity funding in the balance sheet compared to liabilities. Overall, capital ratios indicate that Islamic banks in the GCC are better capitalized compared to similar sized conventional banks.

6.1.3 Operations

There are many operations in the banking environment and operations involve market risk. The operational ratios presented give an indication of banking effectiveness and soundness. Better performing banks have bigger operation ratios. The first ratio, found under operations in table 6.1, is *net interest margin* (NIM), which is an important ratio that indicates the lending income as a percentage. Higher NIM is associated with profitable banks by maintaining good asset quality. The next ratio, *operating income to average assets,* expresses to what degree other income - such as fees - justifies bank earnings. The next two ratios are key profitability indicators *Return on Assets* (ROA) and *Return on Equity* (ROE). ROA is measured by dividing net income by total assets and ROE is measured by dividing net income by shareholder equity. *Dividend payout,* another important ratio for investors, measures how much is paid out on each share. *Non-operating items to net income* denote the percentage of unusual items to net income. Next, *cost to income ratio* indicates bank cost efficiency by measuring the cost of running the bank, such as salaries, as a percentage of generated income. Finally, *recurring earning power* indicates the effectiveness of a bank: this ratio quantifies after tax profit as a percentage of total assets. The operation ratios show that conventional banks in the GCC have, on overall, better and higher operational ratios compared to Islamic banking. However, Islamic banks achieved a better *Return on Assets* (ROA) and *dividend payout*.

6.1.4 Liquidity

The last part in Table 6.1 presents liquidity ratios. Liquidity measures the solvency of banks and indicates how fast a bank can meet debt. It is important to monitor liquidity ratios and it requires frequent updating because they change rapidly. There are six liquidity ratios in table 6.1. The first ratio, *interbank ratio,* measures the difference between money lent to other banks over money borrowed from other banks. This ratio is usually higher than one-handed percent for liquid banks as it shows that a bank is a lender more than a borrower of funds. In the GCC, Islamic banks have a higher *interbank ratio* compared to conventional banks thus indicating a better liquidity. Next, *net loans over total assets* quantify the percentage of bank assets tied into loans which should not be too high for liquid banks. *Liquid assets over customer & short-term funding* account for deposits ran off. This ratio should be higher for more liquid banks because it shows, as a percentage, how short-term funding can be meet if there is sudden customer withdraw. To summarise, Islamic and conventional banks have similar liquidity ratios but conventional banks seem to have better liquidity ratios in comparison to Islamic banks. Therefore, higher liquidity ratios indicate better solvency and less risk exposure.

According to Table 6.1, the performance of Islamic and conventional banks in GCC appear to have comparable overall ratios although conventional banks have better asset quality compared to Islamic banks. Islamic banks, however, are better capitalised than conventional banks as they have better capital ratios. Surprisingly, the capital asset-ratio for Islamic banks is at 14.43 percent compared to 11.51 percent for conventional banks when the Basle Committee recommends a minimum of an eight percent margin. On the other hand, conventional banks in the GCC seem to have higher operational and liquidity ratios compared to Islamic banks.

6.2 Correlation Analysis

The correlation analysis tests the relation between the variables selected in the regression analysis. The correlation matrix shows the expected coefficient signs from the regression. The correlation matrix table 6.2 has three parts: in the first part, variables have been combined for Islamic and conventional banking. The variables are then presented separately for each type of banking.

Table 6.2: Correlation Matrix

Entire Sample (Conventional and Islamic Banking)

	ROA	ROE	Total Assets	TE/TA	TL/TA	NIM	Deposits/TA	Total Exp/Total Asset
ROE	0.3340*							
Total Assets	-0.1270**	0.1290**						
TE/TA	0.4650*	-0.3760*	-0.1950*					
TL/TA	-0.1870*	0.1740*	-0.2060*	-0.3220*				
NIM	-0.017	0.4490*	-0.2450*	-0.3290*	0.6020*			
Deposits/TA	0.063	0.1090	-0.063	-0.1700*	0.1830*	0.035		
Total Expense/TA	0.4270*	-0.089	-0.2710*	0.1780*	-0.075	-0.078	0.4030*	
Non-Interest Exp/Total Exp	0.3850*	0.051	-0.1390**	0.5320*	-0.007	0.045	0.2540*	0.1380**

Conventional Banking

	ROA	ROE	Total Assets	TE/TA	TL/TA	NIM	Deposits/TA	Total Exp/Total Assets
ROE	0.782*							
Total Assets	-0.199**	0.02						
TE/TA	0.383*	-0.218**	-0.419*					
TL/TA	0.209**	-0.138	-0.342*	0.475*				
NIM	0.31*	0.241*	-0.374*	0.157	0.505*			
Deposits/TA	0.393*	0.068	-0.15	0.371*	0.192**	-0.054		
Total Expense/TA	0.044	-0.24*	-0.301*	0.325*	0.301*	0.144	0.711*	
Non-Interest Expense/Total Exp	0.459*	0.283*	-0.174**	0.22**	0.425*	0.346*	0.558*	0.249*

Islamic Banking

	ROA	ROE	Total Assets	TE/TA	TL/TA	NIM	Deposits/TA	Total Exp/Total Assets
ROE	0.3080*							
Total Assets	-0.123	0.2100**						
TE/TA	0.4620*	-0.4220*	-0.1850**					
TL/TA	-0.2430*	0.2990*	-0.2000**	-0.3880*				
NIM	-0.075	0.5790*	-0.2470*	-0.4050*	0.6520*			
Deposits/TA	-0.4620*	0.2240**	0.062	-0.7950*	0.4190*	0.2870*		
Total Expense/TA	0.6000*	-0.017	-0.3170*	0.2460*	-0.2350*	-0.2310**	-0.4700*	
Non-Interest Expense/Total Expenses	0.3870*	-0.001	-0.027	0.5870*	-0.131	-0.089	-0.1720	0.095

** Significant at 1%, ** Significant at 5%*

In part one of table 6.2, Total Assets measures the bank size, which has a negative correlation with ROA and NIM but a positive correlation with ROE. The correlation shows that the coefficient of the regression for Total Assets is expected to be negative with ROA and NIM, but positive with ROE. This means that bigger banks have lower ROA and lower NIM, consistent to previous findings (Berger, 1987). On the other hand, Total Equity to Total Assets (TE/TA), the capital adequacy indicator, has a positive significant correlation with ROA, but a negative correlation with ROE and NIM. Previous findings indicate a positive relation between bank performance and capitalisation (Dermerguc-Kunt and Huizingua, 1999).

The liquidity indicator, Total Loans to Total Assets (TL/TA), has a negative correlation with ROA, but a positive correlation with ROE and NIM. This suggests that an increase in bank loans will increase NIM and return on equity. On the other hand, Deposits to Total Assets shows a positive insignificant correlation with all profitability indicators. In addition, one would expect Total Expenses to affect profitability negatively. However, there is a positive correlation between total expenses and ROA stating higher expense attract higher returns. This may suggest that banks in the GCC do not have many expenses and therefore, banks need to have more activities to attain higher profits. Finally, Non-Interest Expense to Total Expenses is expected to have a positive relation with performance since it is mostly overhead expenses that contribute to banking activities such as employee salaries. Besides, a large portion of bank expense is in the form of interest paid to depositors. Further, the correlation matrix expresses a positive correlation between performance and Non-Interest Expense consistent with previous findings (Bashir and Hassan, 2004).

Part two in Table 6.2 is the correlation matrix for conventional banks. One can see that part two is similar to part one. However, Total Loans to Total Assets (TL/TA) for conventional banks is positively correlated with ROA and negatively correlated with ROE. This may indicate that more loans in conventional banks lead to higher ROA and lower ROE. On the other hand, NIM is positively correlated to (TE/TA) and Total Expenses but negatively correlated to Deposits. This perhaps suggests that well capitalised conventional banks with high expenses have a higher interest income. Conversely, conventional banks with higher deposits ratios should have a lower interest income.

The final part in Table 6.2 is the correlation matrix for Islamic banking, which is also similar to part one. However, in this instance, Deposits and ROA are negative correlated. This indicates that Islamic banks with high deposits ratios have low return on assets according to correlation relation. Also, Non-Interest Expense for Islamic banks impact profitability negatively contradicting to Bashir and Hassan (2004) findings.

Finally, this section has given an introduction to correlation analysis among variables expressing different signs. Correlation implies the relation between variables and may not mean cause. However, coefficients for regression analysis usually have similar signs as in the correlation matrix. Therefore, the next section reveals results from the regression analysis as well as compares it to other findings and draws more solid conclusions on the determinants of profitability for Islamic and conventional banks in the GCC.

6.3 Regression Results

This section addresses regression output. There are three parts. Part one addresses the entire sample results combining Islamic and conventional banks. Part two and three address results for conventional and Islamic banks. Multiple-regression is applied to estimate the determinants of profitability for both types of banking. Moreover, Islamic and Conventional banks in GCC are examined and treated in the regression analysis as one country because there are similarities among banking systems.

6.3.1 Aggregate Sample Regression Analysis

The regression results in table 6.3 combine Islamic and Conventional banks. According to the Model, there are three different dependent variables: ROA, ROE, and NIM. The first regression equation, ROA, expresses significant positive coefficients with the logarithmic of Total Assets, Total Equity to Total Assets (TE/TA), and Total Loans to Total Assets (TL/TA). This indicates that large GCC banks have high ROA. Spathis, Kosmidou, and Doumpos (2002) also found a positive relation between total assets (size) and ROA for Greek banks, which is consistent with our results. Conversely, substantial equity and loans leads to high return on asset for GCC banks. Furthermore, both deposits to assets and total expense have an insignificant positive relation with ROA. Finally, Non-Interest Expense over Total Expense has a significant positive coefficient with ROA. This indicates that overhead expenses such as the cost of ATM technology, contributes to banking performance. Overall, these variables influence ROA by 41.2 percent and Non-interest expense has the highest coefficient.

The second regression model ROE is another dependent variable. The independent variables for ROE express similar coefficients to ROA except TE/TA and Deposits. TE/TA got a negative significant relation with ROE. This indicates that the more equity issued, the lower return on equity generated, which means less efficiency with shareholders investments. Deposits also had a negative relation with ROE but insignificant at ten percent.

Table 6.3: Entire Sample Regression Results

	ROA	ROE	NIM
Constant	-4.36 (0.0000)	-3.235 (0.6760)	3.581 (0.0000)
Total Assets (log)	0.5897 (0.0000)	2.715 (0.0070)	-0.2681 (0.0400)
TE/TA	0.1087 (0.0000)	-0.28462 (0.0020)	-0.0269 (0.0060)
TL/TA	0.0098 (0.0040)	0.03598 (0.1580)	0.0236 (0.0000)
Deposits/Total Assets	0.1852 (0.3710)	-0.049 (0.9750)	-0.3931 (0.0390)
Total Expenses/Total Assets	-0.487 (0.8680)	-9.89 (0.6530)	0.816 (0.7410)
Non-Interest Expense/Total Expense	1.1037 (0.0010)	10.805 (0.0000)	1.1956 (0.0010)
R-Squared	0.427	0.228	0.371
R-Squared (Adjusted)	0.412	0.208	0.354
F-Test	**27.95 (0.000)**	**11.08 (0.000)**	**22.01 (0.000)**

The third model NIM. All the variables expressed similar signs to what was expected in the correlation matrix. In other words, NIM in table 6.2 part one showed a similar sign with the variables in the correlation matrix as for the coefficients. Thus, the coefficient of Total Assets indicates that small banks have large NIM. Spathis, Kosmidou, and Doumpos (2002) also found that smaller banks have large NIM, which is consistent with our findings. This means that large banks are less profitable than small banks in terms of NIM. However, according to Boyd and Runkle (1993), large banks are less likely to fail compared to small banks since there are usually well capitalised. Moreover, all the variables have significant coefficients with NIM except Total Expense. Finally, the r-squared adjusted for the model is 35.4 percent.

6.3.2 Conventional Banking Results Analysis

The results in table 6.4 represent conventional Banks in the GCC. These results will be compared to the Ben Naceur (2003) findings. He studied conventional banks and included similar variables. Though, only ROA and NIM were dependent and profitability indicators in his study.

Table 6.4: Conventional Banking Regression Results

	ROA	ROE	NIM
Constant	2.2040 (0.0300)	36.42 (0.0000)	4.557 (0.0000)
Total Assets (log)	-0.1914 (0.1340)	-1.729 (0.1760)	-0.4313 (0.0040)
TE/TA	0.0705 (0.0020)	-0.5591 (0.0140)	-0.0079 (0.7680)
TL/TA	0.001 (0.8570)	-0.044 (0.4080)	0.0192 (0.0030)
Deposits/TA	0.9856 (0.0000)	6.009 (0.0110)	-1.0474 (0.0000)
Total Expenses/TA	-14.964 (0.0000)	-121.23 (0.0000)	8.472 (0.0120)
Non-Interest Expense/Total Exp	0.3591 (0.4250)	6.989 (0.1220)	2.0325 (0.0000)
R-Squared	0.407	0.276	0.448
R-Squared (Adjusted)	0.378	0.242	0.423
F-Test	**14.39 (0.000)**	**8.02 (0.000)**	**17.60 (0.000)**

First, in the ROA model, the explanatory variables appear to have positive coefficients with the exception of Total Assets and Total Expenses. Moreover, our results appear to be consistent with the Ben Naceur (2003) findings except

for Total Expense with ROA. Our results indicate a negative significant relation between Total Expenses and ROA. A negative relation between Total Expenses and ROA may suggest that conventional banks need to cut their expenses. However, Ben Naceur (2003) found a positive relation between expenses and profitability for conventional banks. Total Assets also expressed a negative coefficient with ROA but it was insignificant. Finally, the regression output expressed similar signs to the correlation matrix, table 6.2 part two, with the exception of Total Expenses.

Second, the same bank characteristics were applied in the ROE regression equation. The regression results seem to be consistent with the correlation matrix with the exception of Total Assets which present a negative insignificant coefficient with ROE. The regression results suggest that large banks have lower returns on equity, which is inconsistent with the correlation matrix. The constant is 36.42 and significant indicating that there might be other determinants for ROE in GCC conventional banks. However, the overall fit of the model is 24.2 percent, meaning that these variables justify ROE only by 24.2percent. It can also be seen that the coefficient of total expenses is high indicating that conventional banks have large expenses affecting ROE and need to be cut.

Third, NIM is the final model used to identify profitability of conventional banks in the GCC. The results appear to be similar to Ben Naceur's (2003) findings, but in our case, TE/TA, has a negative insignificant coefficient with NIM. This means that higher equity ratios lead to lower interest income. This is irrational because higher equity ratios make banks less reliable on debt (Ben Naceur, 2003). Finally, all the variables are significant except for TE/TA. Also, the regression results are consistent with the correlation matrix and the overall r-squared is 42.30 percent.

6.3.3 Islamic Banking Results Analysis

This section discusses the results in table 6.5 for GCC Islamic banks. The results will be compared to the Bashir and Hassan (2004) findings. They used ROA and ROE as profitability indicators in their regression model. The results will also be compared to the correlation matrixes for Net Income Margin (NIM).

Table 6.5: Islamic Banking Regression Results

	ROA	ROE	NIM
Constant	-9.027 (0.0000)	-30.1 (0.0500)	0.426 (0.8490)
Total Assets (log)	1.204 (0.0000)	5.959 (0.0000)	0.0188 (0.9410)
TE/TA	0.1293 (0.0000)	-0.1971 (0.1750)	0.0075 (0.6770)
TL/TA	0.0204 (0.0000)	0.1056 (0.0020)	0.0252 (0.0000)
Deposits/TA	-0.333 (0.7790)	-2.442 (0.7510)	0.987 (0.3650)
Total Expenses/TA	4.626 (0.3670)	47.7 (0.1530)	-4.964 (0.2270)
Non-Interest Expense/Total Expense	0.9828 (0.0370)	9.933 (0.0010)	0.9562 (0.0790)
R-Squared	0.553	0.356	0.41
R-Squared (Adjusted)	0.524	0.314	0.369
F-Test	**18.95 (0.000)**	**8.49 (0.000)**	**10.06 (0.000)**

First, ROA appears to be positively related to all the variables with the exception of Deposits but this is an insignificant relation. Moreover, our results confirm the Bashir and Hassan (2004) findings. However, our results indicate that TL/TA loans, which are interest-free lending in term of an Islamic bank, are positively and significantly related with ROA. On the other hand, the Bashir and

Hassan (2004) findings indicate a significant negative relation between loans and ROA. In addition, the overall fit of the model is good at 52.4 percent.

Second, ROE, the second regression model, is compared to bank characteristics, which again expresses variation among coefficient signs. However, our results correspond with the Bashir and Hassan (2004) findings excluding loans. Our results indicate a positive relation for TL/TA with ROE at one percent significance level. This indicates that more lending allows banks to generate more return on equity. On the other hand, Bashir and Hassan (2004) found a negative significant relation between lending and ROE. Overall, these variables explain ROE by 31.4 percent.

Third, the NIM regression equation is another profitability indicator for Islamic banks but is classified as interest-free income from lending contracts. The p-values appear to be insignificant for some variables since they are greater than ten percent such as Total Assets, (TE/TA), Deposits, and Total Expenses. Further, all the variables are positively related with NIM except Total expenses. In addition, results contradict to expectations from the correlation matrix. Total Assets, (TE/TA), and Non-Interest Expense were expected to have negative coefficients with NIM according to the matrix. This suggests that large well capitalised banks with high non-interest expenses suffer low NIM. However, these variables justify profitability of Islamic banking lending (NIM) by 36.9 percent. Moreover, there are some differences between our findings and the Bashir and Hassan (2004) findings. This might be due to the difference in the sample studied as they included more Islamic banks in other regions. Finally, Non-interest expense, Total Assets (size), and loans express positive coefficients with all profitability indicators confirming that all these variables add to performance.

Conclusion

This chapter has reviewed different internal bank characteristics that have either positive or negative relation with profitability indicators. These variables also have significant or insignificant relations with performance indicators. Furthermore, the results section was divided into three parts: one part mixed Islamic and conventional banks; the other two presented Islamic and conventional banks separately. Before the results were presented, there was a ratio comparison between Islamic and conventional banking. Following was a correlation analysis that expresses the relation among the variables. The results for conventional banks were compared to the Ben Naceur (2003) findings. The results for Islamic banks were compared to the Bashir and Hassan (2004) outcomes.

The next, and final, chapter gives conclusive remarks on this dissertation and is followed by a section on limitations.

Chapter 7 – Conclusions

Conclusions

This dissertation aimed to identify the determinants of profitability for Islamic banks operating in the GCC between 1997 and 2004. By applying a regression analysis, the determinants of profitability for Islamic banks were compared with conventional banks. In addition, the study of profitability followed previous studies such as Bourke (1989), Molyneux and Thornton (1992), Ben Naceur (2003), and Bashir and Hassan (2004).

The dissertation began by giving a brief overview of Islamic Banking and how it operates next to its counterpart: conventional banks. The dissertation then reviewed the region to be studied - the GCC - by highlighting its economic, banking, and financial markets background. Selected previous literature on bank profitability were summarised and reviewed with an emphasis on Islamic banking literature. In addition, variables included in the study were introduced and explained. The dissertation then presented a ratio comparison between Islamic and conventional banking, which proved similar performance. Finally, regression results were presented, showing how bank characteristics influence performance.

Results on GCC banking were consistent with previous findings such as Bashir and Hassan (2004) for Islamic banks and Ben Naceur (2003) for conventional banks. Results also show the difference in the relationships between bank characteristics and the performance indicators. The performance indicators ROA, ROE, and NIM were taken as the dependent variables for the current study.

The variables in the regression reacted differently to profitability indicators for Islamic and conventional banking. First, total assets, which measures size, indicate a negative relationship with profitability for conventional banks and a positive relationship for Islamic banks. This means that bigger conventional banks are less profitable. Second, Total Equity, which measures capitalisation, has a negative relation with profitability for conventional banks and a positive relation for Islamic banks. This indicates that higher capital ratios support Islamic banks profitability. Third, Total Loans for both types of banking have a positive relationship with profitability indicating that lending improves profitability. Fourth, Deposits have a positive relation with profitability for Conventional and a negative relation for Islamic banking. This indicates that deposits impact Islamic banks profitability negatively whereas it contributes to Conventional banks profitability. Fifth, Total Expenses for conventional banks impact profitability negatively whereas Total Expenses for Islamic banks help profitability. Finally, Non-Interest (overhead) Expense assists both Islamic and conventional banking profitability.

Moreover, the study on GCC Islamic banks gives a different image of financial intermediation. Even though there is some variation in Islamic and conventional banking activities, profitability terms are still similar. In addition, Islamic banking should not be viewed as a religious movement but as a superior system to conventional banking in the GCC. The following section reviews the limitations of this study.

Limitations

This dissertation did not encounter any major obstacles. However, data on banking in the Middle-East is not easily accessible or reliable in general. As mentioned before, this data was obtained from BankScope. Many banks that were included in the study, however, had missing data prior to 1997. Data on Islamic banks gives indicative results instead of conclusive results, as mentioned above and as found in other research conducted in the Islamic banking field (Iqbal and Molyneux, 2005). In the regression analysis, some variables had high p-values, which mean that they are insignificant in terms of the dependent variable.

Another limitation is that some other variables were not included to test bank profitability such as economic indicators. Other research, though, such as Bashir and Hassan (2004), included GDP and inflation, and found that favourable economic conditions have positive affect on profitability for Islamic banks. For example, Islamic bank profitability is high during good economic sessions because lending contracts are likely to be paid back by borrowers and the default chances are low. On the other hand, during high interest rates cycles, conventional banks seem to lose market share because borrowers seem to substitute conventional borrowing for Islamic borrowing because it is cheaper.

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Table 4.1: List of Profitability Literature Revealed

Author / Year of Paper	Countries Studied	Data Period/ Model, Regression	Variables	Results
Short **1979**	Austria, Belgium, Canada, Denmark, England, Wales, France, West Germany, Italy, Japan, Netherlands, Sweden, Switzerland	1971-1975 60 banks Linear Functional Regression	Government Ownership, Concentration, long-term bond rate, discount- rate	1) Relation between profitability, and concentration: positive 2) Negative profitability relation with government ownership
Bourke **1989**	Australia, California, Massachusetts, New York, Canada, Ireland, England, Wales, Belgium, Holland, Denmark, Norway, and Spain	1972-1981 90 banks Linear Functional Regression	Internal: staff expense, capital ratio, liquidity ratio, and loan to deposit ratio External: regulation, size of economies of scale, competition, concentration, growth in market, interest rate, government ownership, and market power	1) Negative relationship between government ownership and profitability. 2) Concentration, interest rates and money supply are positively related to profitability. 3) Capital, reserves of total assets and cash, bank deposits of total assets are positive to profitability.
Molyneux and Thornton **1992**	Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Liechtenstein, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Turkey, UK	1986-1989 671 banks in 1986 1,063 banks in 1987 1,371 banks in 1988 1,108 banks in 1989 Simple linear Equation	Similar to Bourke 1989 variables	Similar results to Bourke (1989) except that government ownership showed a negative relationship with return on capital (profitability)

Author / Year of Paper	Countries Studied	Data Period/ Model, Regression	Variables	Results
Goddard, Molyneux, and Wilson **2004**	Denmark, France, Germany, Italy, Spain, and United Kingdom	1992-1998 665 banks Cross-sectional and Dynamic panel model *Regression*: 1)Time-Series OLS 2) Cross-sectional OLS 3) Generalized Method of Moments (GMM)	Return on equity (ROE), Off Balance Sheet (OBS) dividends, capital asset ratio (CAR).	1) Positive relation between total assets and profitability 2) Neutral relation between OBS and profitability except for positive for UK 3) CAR positive relationship with profitability
Ben Naceur **2003**	Tunisia	1980-2000 10 Tunisian banks Panel model Linear Regression	*Dependent:* Return on Assets (ROA), Net Interest Margin (NIM), *Independent*: overhead expenses, total assets, capital ratio, and loan and liquidity ratio, macro-economic measures, financial structure	1) NIM is negatively related to size 2) Macro-economic measures have no impact on profitability 3) Concentration does not improve Tunisian banking 4) Stock market development help profitability
Spathis, Kosmidou, and Doumpos **2002**	Greece	1990-1999 23 banks (7 large, 16 small) Multicriteria decision Based on UTilite's Additives DIScriminatives (UTADIS)	ROA, ROE, net interest margin(MARG), ratio of loans to deposits (L/D), ratio of current asset to total loan (CA/TL), ratio of total asset to total equity (TA/TE)	1) Large Greek banks have a higher ROA 2) Small banks have large ROE, MARG, financial leverage, and capital adequacy.
Silva Portela and Thanassoulis **2005**	Portugal	Portuguese banks	Adapted Geometric Distance Function (GDF) to measure profit efficiency	Results showed how adjusting controllable inputs can maximize profits

Author / Year of Paper	Countries Studied	Data Period/ Model, Regression	Variables	Results
Hassoune **2002**	Islamic Banks in three GCC Countries: Kuwait, Saudi Arabia, Qatar	2000 and 2001 Descriptive Statistics comparing similar size banks	ROE, ROA	Islamic banks are less volatile than commercial banks in terms of ROA and ROE (profitability) due to profit and loss sharing
Bashir and Hassan **2004**	Islamic Banks in Algeria, Bahamas, Bahrain, Bangladesh, Brunei Darussalam, Egypt, Gambia, Indonesia, Iran, Jordan, Kuwait, Lebanon, Malaysia, Mauritania, Qatar, Saudi Arabia, Sudan, Tunisia, United Arab Emirates, and United Kingdom	18 banks 1994 23 banks 1995 25 banks 1996 31 banks 1997 39 banks 1998 39 banks 1999 34 banks 2000 22 banks 2001 1994-2001 Linear Functional Regression	*Dependent*: Net-non Interest Margin (NIM), Before Tax Profit to total assets (BTP/TA), Return on Assets (ROA), Return on Equity (ROE) *Independent*: internal and external banks characteristics, economical measures, financial structure variables, and country variables	Similar to Bashir 2000 1) Positive relationship between capital and profitability and negative for loans 2) Total assets negative relationship with profitability 3) Good economical conditions have positive relation with profitability 4) Positive relation between performance and overhead expenses
Bashir **2000**	Islamic banks in Bahrain, Egypt, Jordan, Kuwait, Qatar, Sudan, Turkey, and United Arab Emirates	1993-1998 14 Islamic Banks Linear Regression	*Dependent*: Non Interest Margin (NIM), Before Tax Profit (BTP), Return on Assets (ROA), and Return on Equity (ROE) *Independent*: bank size, leverage, loans, short-term funding, overhead, and ownership, macroeconomic, regulatory, and financial markets	1) Profitability positively related to equity and loans 2) Leverage and loan to assets are positively related to profitability 3) Good economic conditions, such as high GDP growth will lead to high profitability (positive)

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I first thank Allah for all the blessings and support I got during this degree

I dedicate this thesis to my parents, Dr. Abdullah Alkassim and Dr. Shariffah Alkassim.

Faisal A. Alkassim

September 2005

List of Acronyms

GCC: Gulf Cooperation Council

GDP: Gross Domestic Product

NCO: Net Charge Off

NIM: Net Income Margin

OLS: Ordinary Least Square

ROA: Return on Assets

ROE: Return on Equity

TE/TA: Total Equity to Total Assets

TL/TA: Total Loans to Total Assets

Abstract

This dissertation analyses the profitability of Islamic and conventional banking in the Gulf Cooperation Council over the period 1997-2004. The GCC has been chosen as a focal point for the study since there are substantial revenues from oil trade. Moreover, the study investigates whether internal bank characteristics may explain the difference in profitability between the two types of banking. In addition, a regression analysis is applied on a sample of banks to test the influence of these variables on bank performance. Furthermore, results indicate that conventional banks in the GCC have better asset quality compared to Islamic banks. However, Islamic banks are better capitalised. Empirical results also suggest that interest-free lending in Islamic banking advocate profitability. Finally, total expenses in conventional banking are high which affects profitability.

Chapter 1 – Introduction

1.1 Background of the Study

Islamic banking is one of the fastest growing segments in the banking industry. It's approximately thirty years old, existing in major Islamic countries and attracting clients that seek to avoid interest. Furthermore, Islamic banks have to avoid interest in any form because it is prohibited in Islam. Therefore, the only solution to avoid interest is to create a profit and loss sharing banking system. The profit and loss system allows the bank to share the risk with the client. Moreover, Islamic banks are required to operate according to Islamic rules and principles.

Unlike Islamic banks, conventional banks operate on the basis of interest. The income of conventional banks is the difference between the interest paid to depositors and interest paid by borrowers. This is the common banking system around the world. However, Islamic banking does not allow this type of transaction since it includes interest.

This dissertation will study the profitability of Islamic banks in the Gulf Cooperation Council (GCC). Islamic banks operating in the GCC will be compared to conventional banks. Moreover, the study on GCC banking is essential to examine the level of profitability. Furthermore, the study is focussed on the GCC, which is located in the Middle-East and consists of six countries; it is considered the world's largest oil reserve.

1.2 Aims of the Study

This dissertation will aim to present an empirical investigation on GCC Islamic and conventional banks. The study of profitability will look at different banking characteristics such as capitalisation, liquidity, and size. However, in order to achieve our main objectives, a number of sub-questions are established:

What is Islamic banking?

What is the GCC?

What is the influence of bank characteristics on GCC Islamic and conventional Banks?

1.3 Methodology of the Study

The methodology of this study uses similar variables that were used by previous profitability studies. The data obtained is unconsolidated taken from balance sheets and income statements in local GCC banks. Data was also extracted from sixteen Islamic banks and eighteen conventional banks. The study will compare the two types of banking between 1997 and 2004.

In addition, the work of Bourke (1989), Molyneux and Thornton (1992), and especially Bashir and Hassan (2004) will be replicated. Moreover, most of the profitability studies use multiple regression analysis to test the profitability of banks. Therefore, the study of profitability on GCC banks will cover different bank characteristics to identify the performance level.

1.4 Structure of the Study

The dissertation will be divided into seven chapters beginning with this chapter as the introduction. This chapter gives a brief background touching on various topics such as Islamic banking and the GCC. This chapter also introduces the research question. Finally, a short methodology is introduced stating that different banking characteristics will be applied to test profitability of GCC banks where the data is obtained from BankScope.

Chapter 2, **Islamic Banking Background,** will give a detailed background on Islamic banking. The chapter will discuss the history of Islamic banking and how it first evolved. Moreover, the rules and principles of an Islamic bank will be discussed. Finally, the lending structure will be examined and will illustrate how an Islamic bank can avoid interest through profit and loss sharing.

Chapter 3, **GCC Overview**, will give a background about the Gulf Cooperation Council (GCC) countries. The background study will look at the economic environment. In addition, the GCC banking industry and financial markets will be reviewed and compared.

Chapter 4, **Literature Review**, will review previous studies on bank profitability. The literature review chapter will reintroduce research papers on profitability of Islamic and Conventional banks for various regions. Examples of some papers to be discussed are Bourke (1989) and Molyneux and Thornton (1992) on western banking, and Bashir and Hassan (2004) on Islamic banking.

Chapter 5, **Data and Methodology**, will give an introduction to samples and data for the purpose of this study. It will also explain bank characteristics, which will be included in the regression. This will be followed with a model. Finally, there will be descriptive statistics on the variables.

Chapter 6, **Findings and Results**, will cover a ratio comparison, correlation, and regression output. The ratio comparison on Islamic and conventional banking in the GCC will review assets quality, capitalisation, operations, and liquidity. Correlation will then test the relation among the variables. Finally, regression output will present results on the entire sample combining Islamic and conventional banks. Then there will be a separate results section for Islamic and conventional. The regression analysis will show how variables influence the performance indicator.

Finally, chapter 7 - **Conclusions**, will conclude and discuss results and findings obtained throughout the study. This chapter also includes a section on limitations and a referencing section that will cover all the resources that have contributed to this thesis.

Chapter 2 – Islamic Banking History and Background

Introduction

The Islamic banking system is thirty years old and is considered part of the banking industry. The term ‘Islamic banking’ is also known as ‘profit and loss sharing’ or ‘interest-free banking’ according to Hassan and Zaher (2001). Therefore, the objective of this chapter is to give an overview of the history of Islamic banking. Section 1 compares activities between Islamic banking and conventional banking. Section 2 reviews the history of Islamic banking. Section 3 explains what is prohibited in an Islamic bank. Section 4 discusses different lending contracts in an Islamic bank.

2.1 Islamic and Conventional Banking Activity Comparison

Conventional banks are known as financial mediators between depositors and borrowers. The money deposited by clients is lent out to borrowers. The bank revenue is the difference between interest paid to depositors and interest paid by borrowers. Moreover, banks have expenses such as employee salaries and overhead costs that assist bank operations. Bank profit is obtained after expenses are deducted from interest revenues. Consequently, this is the basis of a Conventional banking system: the dealing of interest.

The other system is Islamic banking system, similar to conventional banking but interest-free. Islamic banking is based on profit and loss sharing (PLS) between the borrower and the bank (Khan and Mirakhor, 1987). Moreover, Islamic banks maintain profit by mixing investment and commercial banking operations to engage in acceptable rates of return for depositors but in accordance to Islamic rules and principles.

In addition, the main difference between Islamic and conventional banks is the use of money. In conventional banks, money is used as a commodity that is bought and sold through the use of interest. However, Islamic banks use money to facilitate transactions and for trading purposes.

2.2 History of Islamic Banks

The evolution of Islamic banks came after a strong demand on the part of the Islamic world for an interest-free banking system. According to Iqbal and Molyneux (2005, p.37), the establishment of Islamic banking began in a small town in Egypt, called Mit Ghamar by Dr. Ahmed Alnajar in 1963. Dr. Alnajar completed his education in Germany and found that it had many saving banks operating on interest. He took the idea from a savings bank in Germany and created his own small Islamic bank that was interest free. This pioneer experiment by Dr. Alnajar was a leading idea in the banking world.

After Dr. Alnajar's small bank proved successful, the establishment of other Islamic banks followed, for example, the founding of the Nasser Social Bank in Egypt in 1971. The objective of the Nasser Bank was to lend out money as a charity on the basis of a profit and loss sharing system and to help the needy. In 1975 the idea of Islamic banking spread to other Islamic regions such as the establishment of Dubai Islamic bank in United Arab Emirates and The Islamic Development (IDB) Bank in Jeddah, Saudi Arabia (Wilson, 1990, p.7).

The International Association of Islamic Banks IAIB reported in 2004 that there were 267 Islamic banks in 48 countries with an asset size of $260 billion. Even though Islamic banking has only been around for thirty years and is still in an evolving stage, it strives to maintain its position in the banking industry. Some countries, such as Iran, Sudan, and Pakistan, use Islamic banking systems and follow the Islamic *Shariah* laws for all their banking and regulation operations.

In addition, Islamic banking operations are not limited to Islamic countries but are spreading throughout the world. One reason is the "*growing trend toward transcending national boundaries, and unifying Muslims into a political and economic entity that could have a significant impact on the pattern of world trade*" (Abdel-Magid, 1981).

2.3 Islamic Banking Rules and Principles

Islamic banking rules are according to the Islamic Shariah derived from the Quran and prophet Mohamed's sayings. The three main practices clearly prohibited in the Quran and the prophet's sayings are, *Riba* (Interest), *Gharar* (Uncertainty), and *Maysir* (Betting).

Firstly, *Riba* (usury) or interest is prohibited in Islam and this is clearly stated in the Quran. *Riba* is the excess on a loan big or small, fixed or variable. According to Siddiqi (2002), *Riba* is unfair if the borrowers suffer huge losses, while the lender enjoys excess profits from interest. He also adds that it creates an overall inefficient and corrupt economy because lenders generate continuous profit and borrowers may default. There are many types of *Riba* but the main type occurs when there is an unfair exchange between two parties. Therefore, *Riba* is prohibited since it is unjust and unfair to one party. (See Dar and Presley, 2000 for details). Furthermore, allowing interest has led the world to a position of a huge pyramid of debts. Also, if security were available, then sufficient returns would be guaranteed.

Secondly, *Gharar* is a type of trading that is also prohibited in Islam which according to El-Gamal (2001) means "trading in risk". *Gharar* occurs when the purchaser does not know what has been bought and the seller does not know what has been sold. In other words, trading should be clear by stating in a contract the existing actual object(s) to be sold, with a price and time to eliminate confusion and uncertainty between the buyers and the sellers.

Thirdly, according to Zaman (1986), *Maysir* is speculation, betting, gambling or taking heavy chances. *Maysir* is forbidden in Islam because it contains ambiguity and does not guarantee returns for beaters. Finally, the three practices listed are the principle forbidden practices in an Islamic banking system and the issue of interest is the most important. If all these conditions are prevented, then a pure Islamic banking system can occur.

2.4 Islamic Banking Lending Models

Islamic banks have to lend out their money to generate sufficient profit and stay in business. However, lending has to be done according to Islamic rules and principles, based on profit and loss sharing as well as avoiding interest. In Islamic banks there are sixteen different lending contracts and some will be explained in this section.

The first type of contract is called the *Mudarabah* lending contract and has two forms: one tier and two-tier. Both forms involve two parties: one providing labour (borrower) and the other providing capital (bank) at a predetermined share of risk and return (Hassan and Zaher, 2001). The two-tier Mudarabah works as a joint stock company, whereby the bank, with shareholders, invests in the fund for the purpose of lending it out to entrepreneurs. The rate of return is agreed on after expenses have been deducted. On the other hand, the one-tier *Mudarabah* is a contract between the bank and the money borrower, to provide capital for a specific project. The difference between the two-tier and one-tier system, is that the one-tier *Mudarabah* only includes the bank and an investor. However, in a two-tier system, there is the bank, an investor and a money borrower and this works as a stock company.

The second type of lending contract is called *Musharakah* (partnership). *Musharakah,* similar to *Mudarabah,* is a financial contract between two or many parties to establish a commercial enterprise based on capital and labour contribute. The profit and loss is shared at an agreed proportion according to amount of contribution (Hassan and Zaher, 2001). For example, if an entrepreneur had fifty percent of the capital for an investment in project X but needs more capital to continue, the bank then may fund the other fifty percent with the agreement of sharing profit and loss at a predetermined rate of return.

The third and most common contract is *Murabahah,* referring to a sale of a good or property with an agreed profit against a deferred or a lump sum payment. There are two contracts in *Murabahah*: the first contract is between the client and the bank, whereas the second contract is between the bank and supplier. The client (purchaser) orders a certain commodity through the bank, the bank then buys the commodity from the supplier and sells it to the client with specified profit whereby the client can make a lump sum or a deferred payment to the bank. (For details see Iqbal and Molyneux, 2005 p. 22). For example, if a client needed a certain car but lacked funding; in this case, the bank would buy the car and would sell it to the client at a higher cost. The client would then make monthly payments or a lump sum payment on the car to avoid interest.

The next type of contract is called *Ijarah* (leasing) or a lease ending in a purchase. According to Iqbal and Molyneux (2005, p. 23) there are two parties involved in this contract, the leasee and leaser. The leaser (bank) is the real owner of the asset or property and it is rented out to the leasee until full payment is received. The leasee has the option to keep the asset at contract maturity or give it back to the bank. If all payments are received, the leasee can keep the asset but at a higher price than the usual asset price. Thus, this contract is similar to *Murabahah* but it includes a purchase and a rent contract.

Salam is another contract where full payment for a good is paid in advance but the delivery of the good is made at an agreed future date. However, not many goods are suitable for a *Salam* contract but it helps an Islamic bank to buy goods in advance for a future delivery date to make products available on client request. (For more details see Iqbal and Molyneux, 2005 p. 25).

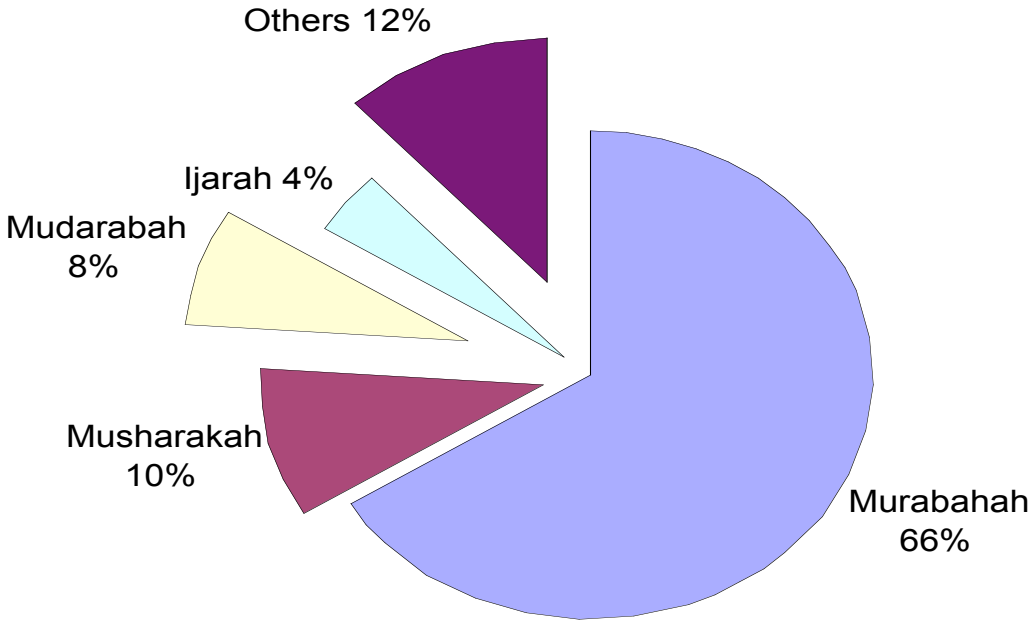
The final type of contract to be explained is *Istisna* (manufacturing). *Istisna* is a contract of manufacturing for an agreed price and delivery date. It is similar to the *Salam* contract but *Istisna* includes two contracts. The first contract is between the client and the bank requesting to manufacture. The second contract is between the bank and manufacturer. The bank acts as a mediator between the client and the manufacturer. The client makes monthly payments after the order has been put in to sponsor the manufacturing. (See Iqbal and Molyneux, 2005 p. 26 for details). For example, if a client needed to build a house in a certain area, then the client may request the bank to build the house to be ready on a certain day by way of monthly payments. The bank then puts in an order to the manufacturer. According to El-Gamal (2000), neither *Salam* nor *Istisna* financing contracts are rarely used in Islamic banks.

All the contracts presented are interest-free and represent the Islamic bank as an investment manager or as an investment deposit. Moreover, if borrowers default for serious reasons, they are not obligated to repay borrowed money based on profit and risk sharing. In addition, these lending contracts are detailed, with the timing of payments and the responsibilities of both parties clearly stated, to prevent confusion and misunderstanding. These contracts lead to a more stable financial system that has a favourable impact on both Islamic banks and overall economic growth according (Iqbal and Molyneux, 2005).

On the other hand, every Islamic bank has a *Shariah* board that regulates internal operations to maintain consistency with Islamic rules and principles. The board has scholars that approve or disapprove banking issues (Dar and Presley, 2000). For instance, issues regarding lending contracts and their details need to be followed closely to ensure that both parties are treated fairly.

Finally, the following pie chart illustrates which lending contract is most commonly used in a sample of ten Islamic banks in the Middle-East. The pie chart shows that Islamic banks lend most of its money through *Murabahah* contracts (66%), followed by *Musharakah* (10%*),* and *Mudarabah* (8%).

Graph 2.1: Proportions of Financial Contracts in Islamic Banks.



Source: Constructed by Author Using data from Iqbal and Molyneux (2005, p.29).

Conclusion

This chapter presented an operational comparison between Islamic and conventional banking. It also outlined a brief history on Islamic banks and stated how a small idea in the banking industry by Dr. Alnajar could become part of the banking system practiced in many countries. It illustrated how every Islamic bank must prevent the three aforementioned practices: *Riba*, *Gharar*, and *Maysir* in order to operate in a pure Islamic banking environment. In addition, there are some other issues that were not covered such as trading with alcoholic, tobacco, and pig substances since there are as well forbidden in Islam. Finally, this chapter discussed some lending contracts and shown what an Islamic bank can offer its clients and investors.

The next chapter will discuss the economic, banking, and financial market background on the Gulf Cooperation Council (GCC) countries. The study of bank profitability will be conducted on Islamic banks operating in the GCC region and will be compared to conventional banks. Therefore, a brief background on the GCC is essential to help understand the profitability study on Islamic banks operating in the GCC and to aid the comparison to conventional banks.

Chapter 3 - GCC Background

Introduction

The study of bank profitability is applied to Islamic and conventional banks operating within the Gulf Cooperation Council region (GCC). The study of the GCC banking environment is essential because it witnessed many challenges in its early banking days. These challenges were due to foreign involvement in bank ownership. The aim of this chapter is to present a brief background on the GCC before the bank profitability study is conducted. Section 1 gives a brief overview of the GCC. Section 2 gives some economic background on the GCC including a graph. Section 3 presents GCC banking including a graph that compares total assets among countries. Section 4 presents a summary on GCC financial markets.

3.1 GCC overview

The Gulf Cooperation council (GCC) consists of six countries located in the Middle East: Saudi Arabia, Kuwait, United Arab Emirates, Qatar, Oman and Bahrain. The GCC was founded in 1981 with the objective of coordinating policies of various political, economic, and social matters among its member states to have similar regulations. The GCC countries are independent governments with independent currencies. The total population of the GCC region is estimated to be approximately 34 million, which gives it third the population of the Arab world. The main religion is Islam.

The GCC is wealthy in the natural resource oil: an important commodity around the world. For many of the GCC countries, oil was discovered in the 1940's in the aftermath of World War II. Having the world's largest oil reserves, the GCC depends heavily on oil exports. The next section illustrates how oil trade impacts GCC economies.

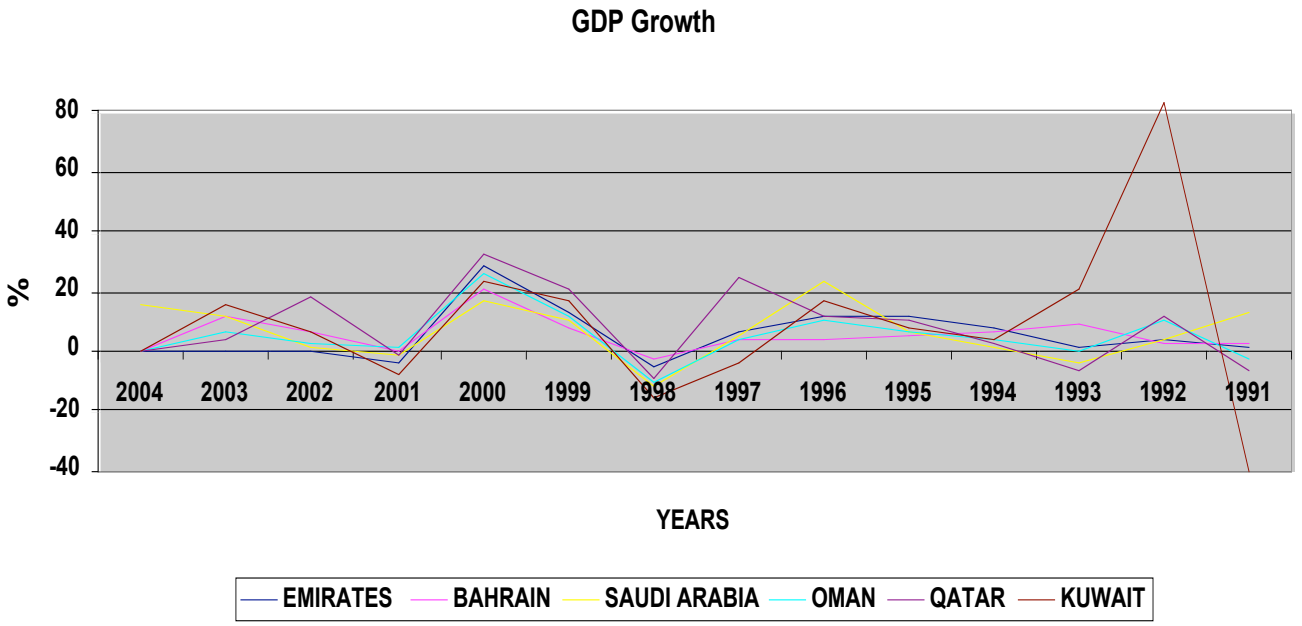
3.2 Economic Background

The GCC countries experience a similar, stable economic background. Many of the GCC countries have monarchy governments that favour the oil trade. In addition, the GCC governments do not impose any income taxes on the general public regarding local economies. However, there are some tariffs and licensing fees that have to be paid. The GCC governments encourage open economies and foreign direct investments. Although their economic structure depends on the oil trade, the governments are trying to reduce their reliance on oil retailing by creating diverse economic structures through local investments such as agricultural and manufacturing (Al-Jarrah, 2002 p.43).

The economic trend in the GCC experienced substantial growth in the 1970's due to the increase in oil exports. The economic trend is measured by Gross Domestic Product (GDP) and Imports Exports. Real GDP measures the size of the economy for each country. In the GCC, there has been substantial improvement in real GDP during the last decade. Table 3.1 in the appendix gives a brief overview of the real GDP in the six GCC countries. Another economic performance measure is GDP growth, which is calculated using the real GDP. Graph 3.1 in the next page illustrates GDP growth for the six GCC countries. The GDP growth experienced some fluctuation during these years especially in Kuwait. Table 3.2 in the appendix also shows numerically GDP growth in the GCC.

Table 3.3 in the appendix shows GDP per Capita which is obtained after dividing real GDP by the estimated population. GDP per Capita expresses, on average, how much each individual earns in terms of salary. For example, in 2001, Qatar had the highest GDP per Capita at $28,140, followed by the Emirates $20,602, Kuwait $14,398, Bahrain $11,115, Oman $8,314, and then finally Saudi Arabia at $8,197.

Graph 3.1: GDP Growth 1991-2004



Source: Constructed by Author Using Data from Arab Monetary Fund Report (2005).

Trade in the gulf is high and most of the imports are general necessities like foods and general needs, as the GCC lacks some natural resources. However, there is an enormous amount of oil exports. Table 3.4 and 3.5 in the appendix show the trade balance in the six GCC countries. Imports and exports are highest in Saudi Arabia and Emirates given that these two countries are the largest in terms of area and population. Imports and exports are lowest in Qatar and Bahrain as they are the smallest in terms of population and area.

This section summarised the GCC economies expressing growth in Qatar, United Arab Emirates, and Kuwait in terms of GDP growth and GDP per Capita. Other economies, Bahrain, Oman, and Saudi Arabia are still improving but at a slower pace.

3.3 Banking in the GCC

Early banking in the GCC region experienced a lot of foreign ownership mostly by a bank named British Bank in the Middle East. This bank had braches across all six GCC countries. Other foreign banks were also popular as there were large revenues from oil trade. Local banks were not common as there was not sufficient experience. However, governments later adopted central banking systems to eliminate foreign involvement. Today, the Saudi banking system allows a maximum of forty percent foreign ownership and the other sixty percent must be local ownership. In other GCC countries however, foreign ownership is still permitted with no requirement of local ownership, but they must abide to the central banking rules and regulations (Iqbal and Molyneux, 2005 p.114).

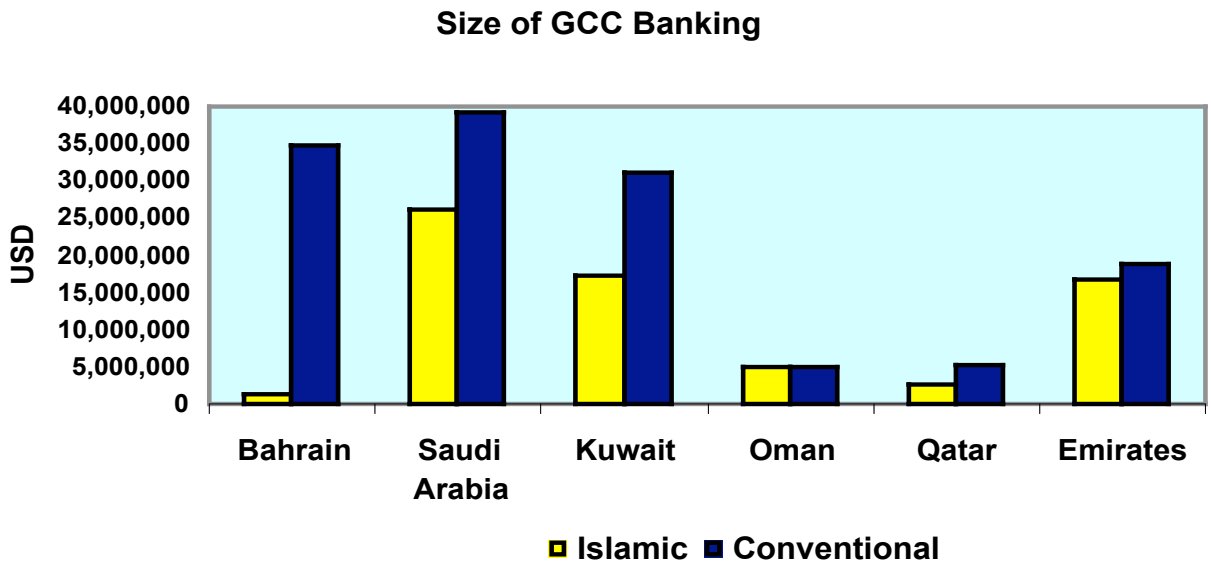
Local currencies in the GCC were not popular and foreign currencies such as Indian Rupee were more commonly used. However, between the 1950's and 1970's all the GCC countries adopted their own local currencies and tagged them to the US dollar. The currencies are tagged to the US dollar as most of the oil revenues are in US dollars. However, the GCC plans to have a single floating currency by 2010.

Banking in the GCC has been affected by many major incidents according to Al-Suhaimi (2001). Firstly, the Iraq-Iran war between 1980 and 1988. Secondly, a severe decline in oil prices in 1986. Finally, the Iraqi invasion of Kuwait in 1990 and 1991. As a result of these events, economies experienced recessions and non-performing loans in banking sectors increased sharply. This made banks create adequate loan provision for similar future events.

According to Al-Jarrah (2002, p.44), the GCC also made enormous efforts to unify banking regulations as well as to coordinate between monetary agencies. An example of this is allowing GCC member countries to open bank branches across the region. Moreover, other efforts included the establishment of the Gulf National ATM Network system, thus creating an integrated ATM system. The GCC also participates in meetings held by the Basle Committee, International Monetary Fund, and World Bank.

Graph 3.2 bellow shows Islamic and conventional bank total assets in the GCC. The graph expresses total assets for the year 2003. Saudi Arabia has the largest Islamic and conventional banks. Surprisingly, Bahrain conventional banking is among the largest in the GCC as it is considered to be a Gulf financial centre.

Graph 3.2: 2003 Total Assets in GCC Banking



Source: Constructed by Author Using Data from BankScope

3.4 Financial Markets in GCC

GCC financial markets are new compared to developed countries. In United Arab Emirates for instance, the stock market capitalisation, as shown by a recent statistic, was $22.75 billion compared to $13.3 trillion in the NYSE (National Bank of Abu Dhabi, Economic and Financial Report). Many of the GCC stock exchanges only started trading officially in recent years. Moreover, financial markets are considered alternative sources of capital compared to bank loans. In the GCC financial markets have contributed to business and investment activities. In fact, stock markets in the GCC were not open for international investors until recently. However, many of the GCC government policies have changed by encouraging foreign investments.

Government Bonds and T-bills are common in the GCC countries. Government bonds are often issued to enhance financial support like in road and hospital construction. In Bahrain, for example, government bonds are issued with a 91 day maturity. Thus, government bonds are the safest mode of investment.

Conclusion

This chapter presented background on six GCC countries collectively. Firstly, the economic trend showed improvement in three economies, Qatar, United Arab Emirates, and Kuwait. Other economies Saudi Arabia, Bahrain, and Oman are improving but at a slower stage. Also, the economic background study was based on Real GDP, GDP growth, GDP per Capita, and Imports-Exports. Secondly, banking in the GCC was reviewed by stating that there was a lot of foreign ownership in early banking. The graphs illustrate that banking in the GCC is largest in Saudi Arabia and United Arab Emirates. Thirdly, financial markets were reviewed explaining that the recent evolution of stock markets in the GCC had an advantage for businesses. Moreover, government bonds became common since it is the best way for government quick funding.

The next chapter reviews previous literature by previous researchers in the field of bank profitability. There are three sections divided according to the geographical region studied. There is one part focussing on Islamic banking profitability studies.

Chapter 4 - Literature Review

Introduction

The study of bank profitability is an important tool to evaluate bank operations and to determine management planning and strategic analysis. Banks contribute to economic growth, so if bank performance is outstanding, the overall economy will be strong. Research has been conducted in the past on the profitability of banking. Early and recent studies on bank profitability have outlined different characteristics and different regions.

An early scholar who conducted research on bank profitability is Short (1979) who studied the relationship between banking profit rates and concentration in relation to government ownership. Bourke (1989) later studied internal and external determinates of profitability in banking, focussing on concentration but including other variables. Molyneux and Thornton (1992) also studied determinates of profitability in European banks using Bourke (1989) as a basis for their research.

Recent papers on profitability have improved as they include more bank characteristics that either contributed or impacted performance. The latest paper on profitability was done on European banks by Goddard, Molyneux and Wilson (2004). This study investigated the profitability of European banks during the 1990s using cross sectional and dynamic panel analysis. Another paper by Ben Naceur (2003) studied banking profitability in Tunisia. Spathis, Kosmidou, and Doumpos (2001), studied the profitability of Greek banks using a unique approach by classifying banks according to size before they were studied. Portela and Thanassoulis (2003) analyzed profit efficiency on Portuguese's banks.

On the other hand, literature on Islamic banking profitability is limited given that Islamic banking is new in the banking industry and requires concrete data. However, a paper by Hassoune (2002) studied the volatility of Islamic banks profits by using ROE as an efficiency measure and ROA as a profitability measure. Another paper by Bashir (2000) examined the performance of Islamic banks in the Middle-East by using internal and external variables. Again, Bashir and Hassan (2004) studied determinates of Islamic banks profitability, analysing bank characteristics, macroeconomic and financial environments.

The objective of this chapter is to introduce working papers by other researchers in the field of bank profitability. Most of papers briefly mentioned above will be discussed in further detail later in this chapter according to geographical regions. Section 1 addresses studies of bank profitability in Europe and North America, section 2 addresses studies on bank profitability in other geographical regions, and section 3 addresses literature on Islamic banking. Finally, section 4 gives concluding remarks followed by a table that illustrates the contents of each paper.

4.1 Literature on Bank Profitability on Europe and North America

Short (1979) studied the relationship between commercial bank profit rates and banking concentration in Canada, Western Europe and Japan. In his paper he examined the relationship between profitability and concentration for sixty banks in twelve countries during the 1970's. Short (1979) included independent variables that were unique to each country and to each bank. Some of the independent variables included are government ownership and concentration by using an H index to quantify concentration. Results show that the government ownership impact on profitability varied throughout the countries studied but expressed an overall negative relationship. He also found evidence that indicated higher concentration rates lead to higher profit rates (Short, 1979).

Bourke (1989) also compared concentration to bank profitability but included other determinants. Bourke (1989) covered ninety banks in Australia, Europe, and North America: a total of twelve territories between 1972 and 1981. The paper split the determinants of bank profitability in terms of internal and external factors: internal factors such as staff expenses, capital ratio, liquidity ratio, and loans to deposit ratio; external factors such as regulation, size of economies of scale, competition, concentration, growth in market, interest rate, government ownership, and market power. Bourke also discusses regulation and show how it can be identified in different countries by constructing a matrix and by stating the differences in entry barriers, interest rate restrictions, and credit ceilings. He also discusses industry structure, risk avoidance, value added measures, and economies of scale. His results show that increase in government ownership leads to lower profitability in banking, which corresponds to Short's (1979) findings. In addition, results also reveal that concentration, interest rates, and money supply are positively related to profitability. The results show that capital and reserves of total assets as well as cash and bank deposits of total assets are both positively related to profitability. Bourke adds that well capitalised banks enjoy cheaper access to sources of funds as they are less risky than less capitalised banks (Bourke, 1989).

Later, Molyneux and Thornton (1992) studied the determinants of European banks profitability. The paper examined eighteen counties in Europe between 1986 and 1989. The studied sample included 671 banks in 1986, 1,063 in 1987, 1,371 in 1988, and 1,108 in 1989. This paper replicated Bourke's (1989) work by using internal and external determinants of bank profitability. However, Molyneux and Thornton (1992) results contradict Bourke's findings showing that government ownership expresses a positive coefficient with return on capital (profitability). The other results were similar to Bourke's, showing that concentration, interest rate, and money supply were positively related to bank profitability (Molyneux and Thornton, 1992).

The recent literature on banking profitability acknowledges various determinants of bank characteristics and builds on previous research. The new types of determinants included in new studies are bank size, degree of diversification, mangers attitudes towards risk, type of ownership, and competition in banking industry. For example, competition depends largely on entry barriers. If barriers are low then the banking industry will be highly competitive. The bank size also plays a major role since large banks have more access to capital and are considered more efficient than small banks (Berger and Humphrey, 1997).

In one of the recent papers on bank profitability on European banks, Goddard, Molyneux, and Wilson (2004) shows similar findings to the paper by Molyneux and Thornton (1992). It investigates the determinants of profitability in six European countries. The countries included were Denmark, France, Germany, Italy, Spain, and United Kingdom and the study covered 665 banks between 1992 and 1998. The study used cross-sectional and dynamic panel models. The variables used in the regression analysis were ROE, the logarithmic of total assets, Off Balance Sheet (OBS) dividends, Capital to Asset Ratio (CAR). The results from both models were similar: evidence reveals that there is a positive relationship between size (total assets) and profitability. Meanwhile, OBS appears to have a positive relationship with profitability for UK but neutral or negative for other European countries. Moreover, results also state that CAR has a positive relationship with profitability. Furthermore, the paper touched on ownership type by indicating that there is high competition in banking due to the fact that there is foreign bank involvement in domestic banks, and that profitability is not linked to ownership (Goddard, Molyneux, and Wilson, 2004).

Following this study was a paper on the profitability factors in Greek banking systems by Spathis, Kosmidou, and Doumpos (2002). This paper presents a study that measures the effectiveness of small and large banks in Greece with the use of ROA, ROE, and Net Interest Margin (MARG) ratios as profitability measures. There were a total of 23 banks - seven large and sixteen small - between 1990 and 1999 using panel data. What makes this paper unique is the way it separates large and small banks before examining profitability. They used a Multicriteria decision based on UTilite's Additives DIScriminatives (UTADIS), to identify the performance of Greek banks. In addition, they included ratios to asses banks' performances: such as loans to deposits (L/D) measuring liquidity; the ratio of current assets to total loans (CA/TL) measuring short-term investments to total loans; the ratio of total assets to total equity (TA/TE) which measures capital adequacy. The results indicate that large Greek banks have a higher ROA and have more access to resources than small banks. Surprisingly, small banks had large ROE and MARG as well as high financial leverage and high capital adequacy (Spathis, Kosmidou, and Doumpos, 2002).

Finally, the study on Portuguese banking is not relevant to this dissertation given that it deals with profit efficiency. However, the study adopted a new procedure called Geometric Distance Function (GDF) to measure profit efficiency in banking. It showed how adjusting controllable bank inputs can maximize profitability in Portuguese banking (Silva Portela and Thanassoulis, 2005).

4.2 Literature on Bank Profitability in Other Banking Systems

There are not many research papers on bank profitability on other geographical regions as most of the research has been conducted on banks in developed countries such as Europe and North America. However, there is a paper by Ben Naceur (2003) that studies the determinants of Tunisian banks profit rates with the use of panel data evidence.

Ben Naceur (2003) used Return on Assets (ROA) and Net Interest Margin (NIM) to determine the profitability of ten Tunisian banks between 1980 and 2000. As in other studies, internal and external variables were used. Internal variables studied were overhead expenses, total assets, capital ratio and loan and liquidity ratio. External variables used were macro-economic measures such as GDP growth, inflation and financial structure. Results show that NIM is negatively related to size, which suggests that large banks tend to have lower interest margins. Also, high net interest margins tend to be associated with banks that hold large capital and have large overhead expenses. Macro-economic indicators have no impact on profitability for Tunisian banks. On the other hand, financial structure such as concentration is less beneficial for Tunisian banking systems but stock market development has positive effects on profitability (Ben Naceur, 2003).

4.3 Literature on Islamic Banking Profitability

Islamic banking literature is limited but research on commercial banks profitability will be applicable. In general, Islamic banking operations are characterised by a high degree of financial risk since the interest factor is absent. According to Dar and Presley (2000), Islamic banks function on the basis of profit and loss sharing (PLS), so if the banks undertake risk then investors share part of the risk. The following is a discussion on some of the studies conducted on Islamic banking profitability.

First of all, Bashir (2000) assessed the performance of Islamic banks in eight Middle Eastern countries. He analyzed important bank characteristics that affect the performance of Islamic banks by controlling economic and financial structure measures. The paper studied fourteen Islamic banks from Bahrain, Egypt, Jordan, Kuwait, Qatar, Sudan, Turkey, and United Arab Emirates between 1993 and 1998. To examining profitability, the paper used Non Interest Margin (NIM), Before Tax Profit (BTP), Return on Assets (ROA), and Return on Equity (ROE) as performance indicators. There were also internal and external variables: internal variables included in the regression were bank size, leverage, loans, short-

term funding, overhead, and ownership; external variables included macroeconomic environment, regulation, and financial market. In general, results from the study confirm previous findings and show that Islamic banks profitability is positively related to equity and loans. Consequently, if loans and equity are high, Islamic banks should be more profitable. If leverage is high and loan to assets is also large, Islamic banks will be more profitable. The results also indicate that favourable macro-economic conditions help profitability (Bashir, 2000).

Secondly, Hassoune (2002) examined Islamic bank profitability in an interest rate cycle. This paper states that Islamic banks operate on a profit and loss sharing basis compared to conventional banks operations which are based on interest. Hassoune also compares ROE and ROA Volatility for both Islamic and conventional banks in three GCC region, Kuwait, Saudi Arabia, and Qatar. He states that since Islamic banking is based on profit and loss sharing, managements have to generate sufficient returns for investors given that they are not willing accept no returns (Hassoune, 2002).

Thirdly, Bashir and Hassan (2004) which forms the basis for this dissertation as it is a comprehensive piece of literature covering every aspect of examining profitability in Islamic banks. Similar to Bashir (2000), Bashir and Hassan (2004) studied the determinants of Islamic baking profitability between 1994 and 2001 for 21 countries. Their figures show Islamic banks to have a better capital asset ratio compared to commercial banks which means that Islamic banks are well capitalised. Also, their paper used internal and external banks characteristics to determine profitability as well as economic measures, financial structure variables, and country variables. They used, Net-non Interest Margin (NIM), which is non interest income to the bank such as, bank fees, service charges and foreign exchange to identify profitability. Other profitability indicators adopted were Before Tax Profit divided by total assets (BTP/TA), Return on Assets (ROA), and Return on Equity (ROE). They studied 43 Islamic banks.

Results obtained by Bashir and Hassan (2004), were similar to the Bashir (2000) results, which found a positive relationship between capital and profitability but a negative relationship between loans and profitability. Bashir and Hassan also found total assets to have a negative relationship with profitability which amazingly means that smaller banks are more profitable. In addition, during an economic boom, banks profitability seems to improve because there are fewer non-performing loans. Inflation, on the other hand, does not have any effect on Islamic bank profitability. Finally, results also indicate that overhead expenses for Islamic banks have a positive relation with profitability which means if expenses increase, profitability also increases (Bashir and Hassan, 2004).

Conclusion

In conclusion, this chapter has outlined selected literature studying bank profitability for Islamic and conventional banking. Studies focussed on different regions, mainly on Europe and North America. However, studies on Islamic banking profitability show that it is not an inferior system to conventional banking. Islamic banking - like any other banking system - should be viewed as an evolving system that has showed tremendous progress. Recent research has also showed that Islamic banking is a practical way of financial intermediation. Moreover, Islamic banking should not be viewed as a religious movement: rather, it is a different way of financial intermediation and previous performance shows that it is an attractive way of banking.

The next chapter presents the methodology and data for this dissertation. There are data sample, variable definition, model, and descriptive statistics.