CHAPTER 11

Efficiency and profitability in Islamic banking

11.1 Introduction

Since the opening of the first Islamic bank in Egypt in 1963, Islamic banking has grown rapidly all over the world, fulfilling the needs of both Muslims and non-Muslims alike. Its operations now include deposit taking and lending as well as all other aspects of banking and financial services.

There are currently 500 financial institutions operating in more than 75 countries worldwide offering Islamic banking and finance products[1].

Dubai Islamic Bank, established in 1975, operates in a dual banking environment and was the first private Islamic bank designed to achieve maximization of profit on a commercial platform, offering commercial consumer products and banking intermediary services. It led to the development of what is now known as the "Islamic window" concept; a segregated division of a conventional financial institution specializing in Shari'a-compliant products and services. Today, many countries have allowed conventional banks to set up Islamic window operations[2], opening the way for prominent international banks to offer Islamic banking and finance products and services.

[1] Estimates of the number of IFIs vary considerably between institutions. For instance, the IMF estimates that the number of IFIs has increased to more than 300, while the Association of Islamic Banking Institutions Malaysia (AIBIM) estimated that there are around 486 IFIs around the world. GIFR 2011 estimates the number to be 500.

[2] There are two types of IFIs. The first are institutions whose entire businesses are conducted in compliance with Islamic law. The second are those institutions that offer Shari'a-compliant products and services, but whose businesses are not conducted in compliance with Islamic law. However, the need for appropriate segregation between conventional financial activities that are impermissible in the Shari'a and Shari'a-compliant products and services has lead to the development of the "Islamic window" concept.

Country	Market share in 2008 (%)	Growth rate of assets of Islamic banks (%)	Growth rate of assets Of banking system (%)[a]	Period
Saudi Arabia [b]	35.0	33.4	19.0	2003 – 2008
Bahrain [c]	29.0	37.6	9.6	2000 – 2008
Kuwait	29.0	28.3	19.0	2002 – 2008
UAE	13.5	59.8	38.1	2001 – 2008
Qatar	11.5	65.8	38.1	2002 – 2008
GCC average	23.8	45.0	24.8	
Jordan	10.3	20.6	11.2	2001 – 2008
Turkey	3.5	41.0	19.0	2001 – 2008
Malaysia	17.4	20.0	14.0	2000 – 2008

Table 1: Market share and growth in assets of Islamic and conventional banks in selected countries
Source: Hasan and Dridi (2010)
[a] Including Islamic banks
[b] Including Islamic windows
[c] Growth rate is calculated for the total of wholesale and retail, while market share is for retail only

The popularity of the "Islamic window" operations has significantly spurred the growth and development of the Islamic banking sector. Studies have shown that the industry will continue to grow at a rapid pace in the coming years. GIFR 2011 research indicates that the Islamic banking industry is set to achieve an estimated 10% increase after nearly 20% annual growth rate for the last one decade. The current size of the industry stands at USD 1.1 trillion (a slight increase from the USD 1.03 trillion as reported by GIFR 2010). This remains well below the potential size of the industry, which is no less than USD 4 trillion.

The Islamic financial market is currently most developed in Iran, Saudi Arabia, Malaysia, and the majority of the GCC countries. In Malaysia, a country which has been recognized as an Islamic banking hub for the east, the Islamic banking industry has been growing at an average rate of 18.9% per annum in terms of assets since the year 2000. The Malaysian Islamic banking sector's total assets accounts for approximately 12.8% of the banking system's total assets, while the market share of Islamic deposits and financing stood at 14% of the total banking sector's total deposits and financing.

Despite having undergone considerable developments during the past few decades, empirical evidence on the performance of the Islamic banking sector is still in its infancy. Furthermore, studies on Islamic banks have generally focused on theoretical issues, and empirical works have relied on the analysis of descriptive statistics rather than rigorous statistical estimation (El-Gamal and Inanoglu, 2005).

11.3 Efficiency performance of Islamic banks

There are at least three reasons to why the study of the efficiency of Islamic banks is important. First, an improvement in cost efficiency means achieving higher profits and increasing the chance of survival in deregulated and competitive markets. This is particularly relevant for Islamic banks as they compete head-on with conventional banks in many areas. Second, customers are interested to know about the price and quality of bank services as well as any new service that banks could offer. This would be influenced by a bank's overall efficiency of operations. Third, an awareness of efficiency features is important to help policy makers formulate future policies which would affect the banking industry as a whole.

Although literature examining the performance of the conventional banking sector is vast, empirical studies on Islamic finance is sparse. However, this is gradually changing as a number of recent studies have sought to apply various statistical methods to examine the performance of Islamic banking sectors worldwide. Among the most notable studies to examine the efficiency of Islamic banks are by Hussein (2003), Hassan and Hussein (2003), El-Gamal and Inanoglu (2005), Sufian (2007), and Hassan (2007).

Hussein (2003) provides an analysis of the cost efficiency features of Islamic banks in Sudan between 1990 and 2000 estimating cost efficiency for a sample of 17 banks over the period. The analysis is novel as Sudan has a banking system based entirely on Islamic banking principles. The results show large variations in the cost efficiency of Sudanese banks with foreign owned banks being the most efficient, whilst state owned banks were found to be the most cost inefficient. The analysis is extended to examine the determinants of bank efficiency. Here, he finds that smaller banks are more efficient than their larger counterparts. In addition, banks that have higher proportion of musharaka and mudaraba finance relative to total assets also have efficiency advantages. Overall, the substantial variability in efficiency estimates is put down to various factors, not least the highly volatile economic environment under which Sudanese banks have had to operate over the last decade or so.

In another study on the Sudanese Islamic banking sector, Hassan and Hussein (2003) examined the efficiency of the Sudanese banking system during the period of 1992 and 2000. During the period under study, the Sudanese banking system had exhibited 37% allocative efficiency and 60% technical efficiency, suggesting that the overall cost inefficiency of the Sudanese Islamic banks were mainly technical (managerially related) rather than allocative (regulatory) causes.

El-Gamal and Inanoglu (2005) looked at the cost efficiency of Turkish banks over the period 1990-2000. The study compared the cost efficiencies of 49 conventional banks with four Islamic special finance houses (SFHs). The Islamic firms comprised around 3% of the Turkish banking market. Overall, they found IFIs to be the most efficient due to their emphasis on Islamic asset-based financing which led to lower non-performing loans ratios. Furthermore, the SFHs achieved high levels of efficiency despite being subjected to branching and other self-imposed constraints such as the inability to hold government bonds.

The Malaysian Islamic banking sector has also attracted researchers' interest. Among others, Sufian (2007) examined the efficiency of the Malaysian Islamic banking sector during the period 2001-2004. The empirical findings from the study indicate that scale efficiency outweighs pure technical efficiency in the Malaysian Islamic banking sector, implying that Malaysian Islamic banks have been operating at a non-optimal scale of operation. He suggests that the domestic Islamic banks have exhibited a higher technical efficiency compared to their foreign Islamic bank peers. He suggests that during the period of study the foreign banks' inefficiency was mainly due to scale rather than management.

The study by Hassan (2007) is among the few performed to examine the efficiency of Islamic banks in a cross-country setting. The findings indicate that during the period 1993-2001, Islamic banks have exhibited a relatively higher profit efficiency compared to cost efficiency. He suggests that the main source of inefficiency is allocative rather than technical. Similarly, his results suggest that the overall inefficiency was output related. The results indicate that on average the Islamic banking industry is relatively less efficient compared to their conventional counterparts.

11.4 Issues and challenges

Existence of economies of scale is an impetus for banks to grow larger, but such benefits may not necessarily outweigh the costs that larger financial institutions impose on the economy. If size benefits outweigh costs, limiting size of banks is not prudent, and such restrictions will push bank risk-taking outside the regulatory parameters. It is preferable that the policymakers impose costs on complex and large financial institutions commensurate with their contribution to systematic risks. Measures could include imposing capital charge and improving macro-prudential supervision of the financial system (Mester, 2010). Such prudential macro-regulation is more apt for Islamic banking industry as they have a universal banking character, which necessarily makes them more complex organizations.

At a time when the conventional banking sector is facing many challenges relating to the credit crunch, Islamic banking is progressively taking the centre stage. In some countries, foreign Islamic banks have been allowed to enter their once closed banking system. In Malaysia, steps have been introduced to liberalize the banking sector to participation from the foreign Islamic banks. Other financial centres like London, Singapore, and Hong Kong are also entering business partnerships with banking institutions from the Middle East.

On the one hand, the move augurs well in terms of innovation and development of Islamic banking products and services. The large multinational banking players may have added advantages stemming from their wide international presence to mobilize Islamic banking funds from the Middle East, as well as their dynamism and innovativeness in introducing and promoting new Islamic banking and finance products to cater for the domestic market's needs. They may also possess inherent economies of scale as a direct extension of their other international operations and so are capable of competing with the incumbent banks.

On the other hand, the entry of new foreign players into the domestic markets will heighten competition, necessitating the smaller Islamic banks to consolidate and cascade down into a need for smoother transitions that maintain Shari'a-compliance. The smaller Islamic banks will have to strive harder to enhance their efficiency and productivity so as to remain competitive, profitable, and most importantly durable. Furthermore, banks failing to follow best practice methods and exhibiting low cost efficiency have the tendency to fail (Berger and Humphrey, 1992; Wheelock and Wilson, 1995; Barr et al. 2002).

It is obvious that the role and responsibilities of IFIs are to serve the financial needs of their various stakeholders, while giving proper consideration to the legitimacy of their operations from a Shari'a point of view (Ahmad, 2006). In mainstream economics, where in principle the promotion of private (individual) self-interest is considered primal for enhancing social well-being, efficiency and productivity criteria for banks had to remain focused on profit, which is the main reason for them being in business. For Islamic banks too, profit adequacy is a requirement for survival but it is supplemented by auxiliary considerations. Furthermore, if an Islamic bank's profit is higher, it will definitely pay more zakat and be able to offer more attractive profit/loss sharing ratios on deposits and loans.

Another issue pertaining to the Islamic banking and finance sector is the need to adapt to a more universal banking model. By doing so, Islamic banks may be able to offer more non-traditional banking products such as salam and istisna (sale by order), mudaraba (partnership of skill and capital), and musharaka (joint venture) compared to bay' muajjal and ijara, which are the most commonly used modes of financing currently. These products will prove to be potent for entrepreneurial development, as the products are relatively collateral free. By carrying an equity flavour and risk-sharing values, Islamic banks can play a significant role in developing new entrepreneurial friendly products not readily found in conventional banking. In the absence of money lending environment, entrepreneurs should stand a better chance to flourish and perform even better. This in turn, could help nurture the establishment of entrepreneurial activities and in the long-run, is expected to flourish the growth and development of the micro-enterprises.

Other issues facing the Islamic banking community is the need for money market instruments that are Shari'a-compliant. There is also an immediate need for short-term money market investments and tools for liquidity management, a space that could benefit immensely from the introduction of new instruments. Most available conventional banking instruments for liquidity management are interest based and therefore not Shari'a-compliant. Until new products or solutions are developed, this issue is going to severely hinder development on the Islamic banking inter-bank money market.

11.5 Determinants of profitability amongst Islamic banks operating in dual banking

The lack of academic endeavour to conduct research into Islamic banking and finance are pronounced by a dearth of comprehensive pertinent data and information. The studies so far have not adequately compared the determinants of profitability of Islamic banks with that of conventional banks. Hassan and Bashir (2005) appears to be amongst the very rare academic attempts to delve into the factors that determine profitability of Islamic banks and in turn, comment on the commercial viability of Islamic banks. This study demonstrates a positive relationship between capital and profitability as well as between loan to asset ratio and profitability. In addition, their study indicated a positive relationship between overhead and profitability. Notwithstanding these findings, there were no follow up studies undertaken to further examine the causes for the positive relationship between capital and profitability amongst Islamic banks. Such positive relationship appears to be counter intuitive to conventional wisdom.

None of the surveyed literature undertook a comparative study at the same time, into the patterns and the extent of the differences between the determinants of profitability for Islamic banks, and for those of conventional banks, all of which operate within a dual banking system. The studies into such differences, if any, between the profitability determinants of Islamic banks and conventional banks that operate side by side within the same market place, can be of relevance and significance from the perspective of evaluating the commercial viability of Islamic banks as a true alternative to the conventional banks. In this regard, the surveyed literature pertaining to Islamic banking, in particular, those of Bashir (2000) and Bashir and Hassan (2005) delve straight into the analysis of the determinants of profitability amongst Islamic banks without any attempt to compare performance of conventional banks with those of the Islamic banks operating in the same country.

Within most dual banking systems, Islamic banks that operate alongside conventional banks, do not have as large a capitalisation, asset base and well diversified talent pool as compared to their conventional counterparts. Comparing the performance of Islamic banks with those of conventional banks may well shed some light as to what the differences are and how significant those differences bring to bear in establishing the true worth of Islamic banks as a viable investment and commercial proposition. Islamic banks worldwide are embarking to catch up to conventional banks in terms of services, market coverage, efficiency and market share. Understanding the differences, if any, between the determinants of profitability of Islamic banks and those of conventional banks operating within the same market place, will hopefully provide some touchstones as to how a blueprint can be structured in operating and regulating Islamic banks, strictly as profit seeking entities, rather than instruments and conduits through which self serving political and religious agenda are attained.

A study was undertaken comparing the performance of Shari'a-compliant banks with conventional banks. The data used was drawn from six Arabian Gulf countries and three Muslim dominant countries in South East Asia. Historical financials from one hundred and twenty six banks spanning from 1998 to 2005 were extracted from Bankscope databank compiled by International Bank Credit Analysts Association (IBCA). Table 2 below gives a breakdown as to the number of Islamic banks and conventional banks that were surveyed. However, the number of banks as surveyed is not exhaustive and there are some banks in the countries under survey, the financials of which had not been included in the Bankscope databank. For instance, no historical financials were provided for Al Rajhi Banks in Saudi Arabia in the Bankscope databank. Likewise, the historical financials of Kuwait Finance House in Kuwait were similarly not included as part of the databank in Bankscope.

11.6 Findings

Table 3 (see appendix) sets out the findings as to how Islamic banks differ from their counterparts.

When examined in means terms, Islamic banks (though only 10% of the total banks surveyed), scored better than conventional banks in pre-tax profit as percentage of total assets, other income as percentage of total assets and net income as percentage of total assets. However, what appears to be startling is the measurement of return on equity, i.e. net income as percentage of total shareholders' equity. In this regard, Islamic banks' return on equity is roughly 1/3 of that achieved by conventional banks.

In terms of operational costs, Islamic banks demonstrated a higher mean score for cost to income ratio and staff expenses as percentage of total assets. As

	NUMBER OF BANKS		
From 1998 to 2005	**Conventional**	**Islamic**	**TOTAL**
Saudi Arabia	4	0	4
Kuwait	4	1	5
Qatar	3	0	3
Bahrain	12	7	19
United Arab Emirates	10	0	10
Oman	11	0	11
Malaysia	20	2	22
Indonesia	48	1	49
Brunei	1	2	3
TOTAL	113	13	126

Table 2: Surveyed Banks

for capital adequacy measures, Islamic banks registered higher ratios in equity as percentage of total assets, equity as percentage of deposits and short term funds and marginally higher in the case of capital funds as percentage of total assets. Bankscope database defined capital funds as an aggregate of equity, hybrid capital and subordinated debt. As expected, Islamic banks did not register noticeable subordinated debt as a percentage of capital funds. Islamic banks commanded about 60% of tier 1 capital adequacy ratio of conventional banks. This could be explained by the fact that conventional banks can raise perpetual non-cumulative preference shares as part of their tier 1 capital structure requirements whilst Islamic banks are not able to raise preference share capital due to Shari'a constraints. Given that Islamic banks cannot access subordinated debt and hybrid capital in raising tier 2 capital, naturally the total capital adequacy ratio of Islamic banks are lower than that of conventional banks. As for total assets, Islamic banks appeared to have an asset base roughly 1/4 of that of conventional banks.

With regards to liquidity management, Islamic banks appeared to be over 38% more liquid than conventional banks when measured in terms of liquid assets as percentage of deposits and short term funds. Lower loan to deposit ratio of Islamic banks indicates that Islamic banks are not generating sufficient financings/loans from their deposit base, as compared to conventional banks. A higher inter-bank ratio amongst conventional banks underscored the inability of Islamic banks to deploy their excess liquid assets into loans to other banks given Shari'a constraints and lack of development of an Islamic inter-bank market. Bankscope's database had defined inter-bank ratio as money lent to other banks divided by money borrowed from other banks. A higher ratio implies the bank concerned is a net placer of funds.

As for asset quality, the message appears to be mixed. Islamic banks appeared to have nearly 2.5 times more non-performing loans as percentage of equity when compared to conventional banks. Conventional banks provided more loan loss reserves as percentage of non-performing loans and as percentage of gross loans respectively, when compared to Islamic banks. Likewise, conventional provided marginally higher loan loss provisions as percentage of gross loans as compared to Islamic banks. However, conventional banks registered 48% more non-performing loans as percentage of gross loans when compared to Islamic banks. Given the above, it appeared that on a comparative basis, conventional banks had to write off more non-performing loans from their gross loans portfolio. The situation may seem dire at the outset without further investigation. It appears that the non-performing loans of Islamic banks warranted a higher write down on their equity as compared to conventional banks.

Table 4 and 5 (see appendix) below set out cross country comparisons. Bahrain registered the highest pre-tax profits as percentage of total assets, other income as percentage of total assets and net income as percentage of total assets. However, on net income as percentage of total equity, Saudi Arabian banks led with an admirable mean of nearly 21%.

As for operational cost measurement, Bahrain registered highest cost to income and staff expenses as percentage of total assets amongst the nine countries under survey. In terms of capital adequacy, the message is mixed. Bahrain registered highest equity as percentage of total assets. Oman took the lead for equity as percentage of total deposits and short term funds and capital funds as percentage of total assets. Banks in Saudi Arabia seemed to have the highest mean when it comes to capital funding through subordinated debt. Highest tier 1 capital adequacy ratio was registered amongst Indonesian banks, perhaps underscored by the presence of high perpetual non-cumulative preference shares issued during the Asian financial crisis, to resuscitate banks in dire consequences of recapitalization. Total capital adequacy ratio registered highest mean score amongst Omani banks. Given the size and strength of the Saudi Arabian economy, it is only natural to see banks in Saudi Arabia registered highest mean score for total assets size which was 2.4 times higher than the next highest mean score for total assets size registered by Malaysian banks.

Other than Malaysia and Indonesia, oil and gas produce appeared to be a mainstay of gross domestic product generation for the rest of the seven countries under survey. Qatar, due to its small population, naturally scored the highest gross domestic product per capita. Indonesia registered the highest gross domestic product growth and gross inflation amongst the countries under survey.

In terms of financial market development, Malaysia leads in the banking markets and stock market. The leadership of Malaysia confirmed that the Malaysian economy is the highest leveraged amongst the nine economies with Malaysia's total bank credit as percentage of gross domestic product outstripping its next closest rival Kuwait by 2.3 times. However, as for stock market liquidity, Kuwait has the most liquid stock market when considered strictly from the perspective of stock market turnover as percentage of stock market capitalisation and stock market turnover as percentage of gross domestic product. U AE and Indonesia had a larger banking market as compared to stock market when considered from the perspective of total banking assets as percentage of stock market capitalisation. Given the paternalistic instinct of Saudi Arabian government, it is not surprising to find that Saudi Arabia registered the highest mean score in terms of total central bank assets as percentage of gross domestic product.

A definitive analysis examining the extent to which the restrictive capital structure of Islamic banks impacted on their profitability and fee-based income generation capability cannot be fully realized, due to the disparity in the level and quality of disclosure of financials amongst banks in the countries surveyed. We merely reaffirms findings from established literature, that capitalisation by shareholders bears positively for generation of profits and fee-based income. After controlling for the country effect, the empirical results demonstrate that there is no noticeable difference between pre-tax profits, other income and net income generated by Islamic banks and conventional banks. This means that within a dual banking system, the results show that

Islamic banks do not enjoy any competitive advantage over and above conventional banks, in the context of generation of pre-tax profits, fee based income and net income. However, the results clearly show that country effect has an impact upon the type of banking. Put simply, the bases upon which Islamic banks in Malaysia generate pre-tax profits, fee based income and net income may differ from Islamic banks and conventional banks in Bahrain. Likewise, conventional banks in Indonesia would generate pre-tax profits, fee based income and net income on premises that are different from Islamic banks in Brunei.

The positive relationship between shareholders' equity and the three performance measurements comprising pre-tax profits as percentage of total assets, other income as percentage of total assets and net income as percentage of total assets, reaffirm the findings of many other studies, which state that the extent of capitalisation by shareholders impacts positively upon profitability. Empirical results herein show that such positive impact is greatest in the context of generation of pre-tax profits. Be that as it may, net income as percentage of shareholders' equity demonstrates a negative relationship with shareholders' equity as percentage of total assets. Perhaps, this suggests that should the pace in the increase in shareholders' equity outstrip profitability, returns on equity would demonstrate reduction given the enlarged denominator in shareholders' equity. Total assets of banks do not seem to exert noticeable impact on generation of profitability and fee based income.

Empirical results also demonstrate that increase in secondary stock market trading could translate into increased profitability and fee based income generation for banks, albeit, the positive impact exerted may seem marginal. Of particular interest is the unanticipated country effect on profitability and fee based income generation. In this regard, banks in Qatar appeared to enjoy a higher propensity to generate profits and fee based income. Given that a great many financial market structure indicators and macro-economic indicators had been dropped as independent variables, due to statistical complications, this chapter cannot conclusively establish what exactly are the telltale signs that distinguish banks in Qatar as prime mover in profitability and fee based income generation as compared to other banks in this survey.

The positive relationship between staff expenses as percentage of total assets and other income as percentage of total assets, affirms the relevance and applicability of the expense preference behaviour theory in the context of generation of fee based income. Such finding is consonant with conventional wisdom that higher staff expenses are deployed towards hiring well trained staff of quality and experience, the services of whom are required to generate higher value added fee based income.

11.7 Conclusion

In the final analysis, this chapter reaffirms the previous findings as outlined in the surveyed literature that capitalisation by shareholders affects profitability positively. However, it is yet to be examined what contributes to the differences in profitability and fee based income generation by Islamic banks, as compared to their conventional counterparts operating within the dual banking system. At this juncture, it would appear that if ever there are differences or distinguishing features, the restrictive capital structure of Islamic banks as a factor does not seem to have contributed to the premises upon which profitability and fee based income are generated for Islamic banks and conventional banks operating within a dual banking system setting. Notwithstanding the above, the intertwining impact between country effect and type of banking system as shown in the empirical results may pave the way for future research into performance of Islamic banks and conventional banks of the same country operating in foreign countries. Such research may be meaningful given that the winds of change brought to bear by globalisation compel banks to compete outside their respective comfort zone of home country advantage.

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Appendix

Table 3
Average for period: 1998 to 2005

	Mean			Standard Deviations		
	Conventional	**Islamic**	**TOTAL**	**Conventional**	**Islamic**	**TOTAL**
Performance measurements						
Pre-tax profit as % total assets	1.675344	1.966038	1.695859	7.342796	5.35339	7.217971
Other income as % total assets	2.072639	2.152	2.077638	7.034371	3.36684	6.859893
Net income as % total assets	1.332999	1.797778	1.366418	7.007193	4.9142	6.876517
Net income as % equity	16.19151	4.928889	15.3806	64.48717	16.6053	62.344
Operational cost						
cost to income	43.07466	56.75582	44.04433	54.88931	34.0378	53.77816
staff expense as % total assets	1.134979	1.7216	1.155179	0.9771638	2.44621	1.063706
Capital adequacy						
Equity as % total assets	15.23239	23.92557	15.89359	17.95929	23.4796	18.56303
Equity as % deposits & short term funds	35.81791	41.27345	36.22151	103.0134	72.6018	101.0517
Capital funds as % total assets	14.21935	14.83643	14.24899	16.63573	11.6039	16.42247
Subordinated debt as % capital funds	5.045304	0.430357	4.797759	11.45749	2.27724	11.20585
Tier 1 Capital adequacy ratio	23.6318	13.97857	23.15927	30.52918	5.90973	29.86961
Total Capital adequacy ratio	26.34.788	13.72381	25.85603	31.48712	5.36721	30.98046
Total assets *(USD mil)*	3717.022	919.4968	3500.214	6568.645	972.876	6358.576
Liquidity						
Liquid assets as % deposits & short terms funds	30.16993	41.71661	31.04671	39.36874	92.7819	45.66007
Loan to deposit ratio	89.32149	76.31724	88.79771	80.67019	24.6384	79.21734
Interbank ratio	216.0712	182.5158	214.6822	210.0889	212.156	210.0478
Asset quality						
loan loss provision as % gross loans	2.751617	2.67619	2.748128	12.21269	6.62102	12.00713
non-performing loas as % gross loans	11.63486	7.851154	11.47145	13.50352	5.75113	13.28251
loan loss reserves as % non-performing loans	104.5249	62.73577	102.6802	101.5237	26.2943	99.77227
loan loss reserves as % gross loans	10.70389	6.222083	10.4096	14.27686	5.60598	13.91703
non-performing loans as % equity	5.452301	13.40476	5.700446	99.98549	65.4196	99.06551

Maximum			Minimum		
Conventional	**Islamic**	**TOTAL**	**Conventional**	**Islamic**	**TOTAL**
61.5	20.6	61.5	-95.6	-20.1	-95.6
136.6	14.94	136.6	-33.5	0.13	-33.5
53	20.6	53	-95	-14.2	-95
967.1	33.2	967.1	-534.9	-83.6	-534.9
412.5	260.5	412.5	-560.6	17.99	-560.6
9.15	11.58	11.58	0.08	0.28	0.08
99.7	98.7	99.7	-129.2	4.6	-129.2
969.23	375	969.23	-214.17	4.92	-214.17
99.72	51.02	99.72	-129.21	4.82	-129.21
57.01	12.05	57.01	-105.11	0	-105.11
295.5	28.4	295.5	5.4	6.8	5.4
296.7	29.4	296.7	-236.2	6.8	-236.2
54738.1	4192.8	54738.1	26.6	14.1	14.1
477.5	700	700	0	1.6	0
862.5	117.9	862.5	1.2	33.2	1.2
982.49	826.86	982.49	0	1.01	0
87.2	30.6	87.2	-161	-2.6	-161
88.18	19.7	88.18	-1.9	1.21	-1.9
905.9	145	905.9	-187.8	37.7	-187.8
127	31.2	127	0.24	0.62	0.24
540.5	136.4	540.5	-975.8	-201.5	-975.8

Table 4
Mean for period: 1998 to 2005

Performance measurements	Malaysia	Indonesia	Brunei	Kuwait
Pre-tax profit as % total assets	1.655128	0.538077	1.290909	1.88125
Other income as % total assets	1.194872	2.585594	1.04222	
Net income as % total assets	1.174359	-0.1663158	0.9	1.832727
Net income as % equity	10.6391	19.27708	7.568182	15.93818
Operational cost				
cost to income	40.4477	47.96	34.01294	32.75061
staff expense as % total assets	0.711835	1.249596	0.47	0.528125
Capital adequacy				
Equity as % total assets	12.24398	10.87328	15.45727	12.02424
Equity as % deposits & short term funds	16.83584	21.34341	23.16091	19.32182
Capital funds as % total assets	12.94258	11.1034	20.33077	11.69
Subordinated debt as % capital funds	6.272126	5.393361	0	1.541818
Tier 1 Capital adequacy ratio	23.82327	33.77206		16.77692
Total Capital adequacy ratio	26.01772	27.82184		19.66154
Total assets *(USD mil)*	6427.571	1815.397	788.2909	5511.167
Liquidity				
Liquid assets as % deposits & short terms funds	38.19056	32.70338	49.39091	37.2129
Loan to deposit ratio	95.8	84.04439		56.92188
Interbank ratio	170.3923	291.1428	98.54	130.02
Asset quality				
loan loss provision as % gross loans	1.477692	3.485187		0.908333
non-performing loas as % gross loans	10.08662	12.72092		12.84656
loan loss reserves as % non-performing loans	93.16039	123.2066		73.49406
loan loss reserves as % gross loans	6.538125	12.91629	8.395454	9.886061
non-performing loans as % equity	20.57197	-8.2301		15.825

Bahrain	United Arab Emirates	Saudi Arabia	Qatar	Oman	TOTAL
4.159091	2.905714	1.84375	2.056522	2.948438	1.695859
4.664444	1.830909	1.01375	1.559583	2.267424	2.077638
4.469697	2.867143	1.828125	2.113043	3.239063	1.366418
11.48182	15.71571	20.78437	19.86087	11.3875	15.3806
51.40066	37.07113	42.99937	38.52708	44.93937	44.04433
2.597333	1.077183	0.98	0.801111	1.481094	1.155179
32.93476	19.17264	8.665625	10.8875	30.36364	15.89359
77.44361	27.08167	9.979062	12.97792	156.7233	36.22151
19.73605	21.28235	8.790323	11.53211	28.2083	14.24899
1.806389	0	11.45333	6.633571	4.786579	4.797759
23.35385	25.76	16.064	18.72308	16.32917	23.15927
26.764	23.27143	17.20714	21.6625	29.16316	25.85603
2552.981	2989.136	15291.48	1434.796	855.1727	3500.214
41.78081	3.841791	11.93438	33.525	20.06885	31.04671
72.36585	81.1575	50.735	63.48917	176.0387	88.79771
154.5942	366.0927	85.46219	294.1058	146.2549	214.6822
10.21667					2.748128
8.707097	6.895522	6.62871	17.06087	18.65614	11.47145
98.23774	102.3052	120.6913	75.83348	65.70318	102.6802
17.73833	6.495735	6.641875	12.58083	10.44982	10.4096
21.34783	3.048571	0.0516129	31.01739	27.56957	5.700446

Table 5
Mean for period: 1998 to 2005

Macro-economic factors	Malaysia	Indonesia	Brunei	Kuwait
Oil & Gas export contribution as % Gross Domestic Product	12,45	5,221865	57,17375	42,27818
Gross Domestic Product per capita (in USD)	4327,386	966,8596	18960,56	20340,4
Gross Domestic Product Growth	9,416383	20,07726	6,866	14,61
Gross inflation	1,915603	14,4569	0,126	1,741515
Financial market structure factors				
Total banking assets as % Gross Domestic Product	176,2892	52,08255		107,0268
Stock market capitalisation as% Gross Domestic Product	149,5393	23,00974		44,46
Stock market turnover as % stock market capitalisation	28,67379	34,36698		57,04
Total banking assets as % stock market capitalisation	122,9666	275,0142		127,998
Total central banks assets as % Gross domestic product	59,66	26,75118		15,54
Total bank credit as % Gross domestic product	125,3104	20,92821	50,32125	54,5432
Stock market turnover as % Gross domestic product	42,88696	7,808199		61,262

Bahrain	United Arab Emirates	Saudi Arabia	Qatar	Oman	TOTAL
24,62579	41,1875	39,65833	54,65136	37,94409	20,94476
13986,72	21237,61	9620	31058,9	8398,424	8376,137
11,12088	16,19781	11,79571	19,83353	11,57121	15,37063
1,190526	4,429167	-0,17375	4,4585	3,475151	7,417245

100,8403	100,9618	60,12	77,13389	47,6778	91,24442
105,6493	31,12321	73,38875	94,5465	33,53515	64,65914
3,292537	7,378261	73,2075	14,431	18,61591	28,57076
99,3503	316,6456	104,3417	107,6283	162,7486	198,6476
21,93358	18,45786	64,68	12,19333	16,71697	23,24033
50,15418	52,9125	29,97667	28,495	36,2486	52,3778
3,518955	4,732174	84,54875	17,403	6,795606	20,07465