Do Islamic Banks Financially Perform Better Than Conventional Banks? A Comparative Study of Pakistani Banks

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Abstract

Pakistan has a majority of Muslims population, but the general public is not well aware of the culture of Islamic banking. Not only the non Muslims but among Muslims, separate groups have different attitudes, opinions, views and understanding toward Islamic banking activities e.g. risk management in Islamic banks, profitability, liquidity, and solvency. In this study, financial ratios are used to compare the performance of Islamic and Conventional banks. This study finds that Pakistani Islamic banks are significantly less profitable and less efficient while Islamic bank are more solvent (less risky) as compared to the Conventional banks. But there is no significant difference in the liquidity position of Islamic and Conventional banks.

Keywords: Islamic banks, Conventional banks, Financial ratios, Performance

Introduction

In Islamic history, limited banking activity, such as acceptance of cash or assets, could be found when Prophet Muhammad (P.B.U.H) was still alive. At that time, people used to deposit assets and money with the Prophet (P.B.U.H) or with Abu Bakr Sedique, the First Khalifa of Islam. From the early days of Islamic history, Muslims were able to mobilize economic resources and allocate them to productive opportunities on an interest free basis. This worked well

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in the early days of Muslims' empire. However, after the industrial revolution and the development of conventional banking in Europe and western economies, a need for a modern Islamic banking was seriously felt. The first modern Islamic bank, established in Egypt in 1971, was called Nasser Social Bank. For a detail history and development of Islamic Banking, see Iqbal & Molyneux (2005). Islamic accounting, an essential tool for the success of Islamic banks, is said to have been developed contemporaneously at the University of Cairo (Samad & Hassan, 2000). Now, in modern age, the Islamic banking industry is on its boom stage. A number of institutions and universities are providing specialized education in Islamic banking and finance. These institutions are not only limited to Muslim world rather a few of the Non-Muslim countries are also engaged in providing such education (Ariff, 2007).

The basic framework of Islamic financial system is based on the Islamic Shari'ah laws and principles. According to Shari'ah principles Riba, which is interpreted as "any unjustifiable increase of capital whether in loans or sales", is prohibited. The core principle of the Islamic financial system and such prohibition is applicable to all forms of interest applicable in Conventional banking system. The current efforts for interest free financial intermediation including Islamic banking started in 1960s. Several Islamic banks were established across different Islamic countries in the 1970s, and their number has been growing since then. In the last twenty years Islamic banking witnessed rapid developments in the areas of financial innovation, risk management, regulation, and supervision of resources available to them.

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Globally, the Islamic banking is growing rapidly. While it makes sense for the Pakistani Islamic financial institutions to be compared against other Islamic banking institutions internationally, it is also important to keep an eye on developments in the Conventional banking sector of Pakistan. We will examine the Islamic banking system comparatively to Conventional banks in Pakistani scenario. Pakistani Islamic banking history started in the late 1970s, under the overall Islamization process of the economy initiatives. As a step towards interest free banking in 1981, all the five nationalized commercial banks at that time were asked to open separate counters to accept interest free, Profit & Loss Sharing (PLS), deposits for all accounts in Pakistani rupees along with interest-bearing deposits. This parallel arrangement was allowed till July 1985, after which no banking institution was allowed to accept interest bearing deposits. The sudden conversion (and lack of preparedness) posed difficulties for the implementation of this practice. Therefore, complete conversion to Islamic banking is still not achieved. For a more detailed history of Islamic banking in Pakistan, see Iqbal & Molyneux (2005).

However, from 2001 an evolutionary process was started in order to nurture the acceptability and development of Islamic banking in a more structural approach. In this regard Meezan Bank was awarded the first Islamic bank license in 2002. Conventional banks were allowed to operate Islamic bank subsidiaries or even "standalone Islamic banking branches" along-side full-fledged Islamic bank. For a more detailed of executive initiatives taken for the Islamization of banking operations, see Mehmood (2002). Just like conventional banks, Islamic banking system has its own risks and challenges

which affect the performance of Islamic banks and pose challenges for their management and controlling authorities. Therefore, the Islamic banking supervisory authorities in Pakistan should play a proactive role in the development of Islamic banking system in the country.

On the question of current performance of Islamic banking and Conventional banking in Pakistan with respect to risk management/solvency, profitability, liquidity, and efficiency, we note there are many areas where Islamic banks look similar to Conventional banks on surface but are quite different in reality. Islamic banks are indeed much different from their Conventional counterparts in profitability, liquidity, solvency and efficiency. The standards issued by the Basel Committee on Banking Supervision regarding credit risk, liquidity risk, operational risk, capital adequacy and consolidation are more suitable for Conventional banking across the countries. Many of these standards are considered equally applicable to Islamic banking but because of the unique nature of the Islamic banking, separate supervisory bodies are required to regulate Islamic banking or modification is made to current banking regulations to cater for the unique challenges of Islamic banking. It is expected that Islamic banking system has a bright future in Pakistan. But currently it is only representing a small fraction of the overall banking sector of Pakistan. Development of standards for Islamic banking globally or domestically still needs a lot of efforts to make Islamic banking an acceptable way of banking in Pakistan and globally.

Literature Review

The performance of banking industry is studied extensively across the world and a very rich literature is available on every aspect of banking industry from different regions of the world (Kraft & Tirtiroglu, 1998, Crystal, Dages & Goldberg, 2001, Fethi, Jackson & Weyman 2001, Juan, Randall & Williams, 2001, Casu & Girardone, 2002, Akhigbe & McNulty, 2003, Berger & Mester, 2003, Kwan, 2003, Mukherjee, Nath & Pal, 2003, Green, Murinde & Nikolov, 2004). Along with country specific studies, there is a handsome literature available on cross-country comparison of banking performance (Molyneux, Michael & John, 1994, Allen & Rai, 1996, Caprio & Klingebie, 1999, Hutchison & McDill, 1999, Bikker & Johannes, 2000, Altunbas et *al.* 2001, Claessens, Asli & Harry, 2001, Hutchison, 2002, Claessens & Laeven, 2004, Figueira, Nellis & Parker, 2006). For a comprehensive literature on cross-country comparison of banking performance see Berger &Humphrey (1997). Islamic banking has received a lot of attention from researchers in the last twenty years and a number of studies are been conducted (Karsten, 1982, Arif, 1989, Zaidi, 1991, Skully & Brown, 2006). Islamic economic and financial system is a center of focus for academics research for so many decades. But because of lack of institutional setup of Islamic banks, empirical research in the field of Islamic banking performance was almost inexistent till the early 1990s. In the last two decades a number of research studies, including empirical studies, have been conducted in the field of Islamic banking. The introduction of Islamic banking on a large scale, across many Islamic countries, and their growing scope and importance in the overall financial system of the world created new avenues for research. Just like Conventional banking research, different studies

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have been conducted to evaluate the performance of Islamic banks domestically and globally (Samad & Hassan, 2000, Sarker, 1999, Yudistira 2004, and Hamim & Naziruddin, 2008). One of the newly introduced research area is to conduct comparative studies of Islamic banks vis-à-vis Conventional banks. Such studies are few in numbers and or only limited to a few countries where Islamic banking services are offered at a large scale (Samad, 1999, Brown, 2003, Kader, Asarpota & Al-Maghaireh, 2007, Bader *et.al.* 2008, Kamaruddin, Safa & Mohd, 2008, Mohamad, Hassan & Bader, 2008 and Johnes, Izzeldin & Pappas, 2009). The performance comparisons of Islamic banks with Conventional banks have always been featured as one of the important consideration of Muslim world. According to a 2007 report cited in Ariff (2007), at that time there were more than 400 Islamic banks with total assets of US$ 7 trillion in more than 44 countries, including the major financial centers in the U.K., Singapore and Switzerland. But keeping the growth prospects and popularity of Islamic banking these numbers will be quite large today.

Despite the widespread academic research and discussion on Islamic financial system and Islamic banking the awareness about Islamic banking products and services is still not clear to the masses of the Muslim world (Gait & Worthington, 2008). Islamic Banks in Pakistan are facing many challenges that are likely to affect their ability to grow and operate within a more competitive environment. Islamic banks, in Pakistan, are in development age and are competing with more stable and established Conventional banking competitors. The lack of awareness in the general public about the products and services offered by Islamic banks, these banks are facing the

challenge of securing a share from the existing consumers using banking services. A large majority of the population is still not having a current account. This makes the job of Islamic banks even more difficult to make a mark in the small target market. Islamic banks are required to improve their service quality which is an important selection and ranking criteria banking customers (Dusuki & Abdullah, 2007). However, a recent study, conducted by Ahmad, Rehman & Saif (2010), shows that in Pakistan Islamic banking customers are more satisfied than Conventional banks customers for the service quality provided by banks. This opens a window of opportunity for Islamic banks to stabilize their footings in Pakistan. Dusuki & Abdullah (2007) also stress on the need for educating and creating awareness among the general public about the distinctive characteristics of Islamic banks. The general public should understand and appreciate how Islamic banking can better and profitably suit their interests. This awareness about the distinctive characteristics of Islamic banks is generally lacking in Pakistan. Islamic banking services are availed by those who don't want to put their savings in conventional banks because of their religious beliefs. They don't actively seek a return for their deposits while the return seeking investors put their savings in conventional banks. But the 2007-08 financial crisis, which largely hit the global banking industry, compelled such investors to rethink about their investment decisions. This crisis came out as a blessing-in-disguise for Islamic banks. Now there is growing awareness about Islamic banking and its distinctive characteristics in Pakistan. The small market share of Islamic banks in relation to overall banking industry represents a unique future opportunity for these banks.

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Now-a-days, the target market for Islamic banks is not limited to those who are concerned with the legitimacy of banking from Islamic point of view only. Islamic banking currently have the potential of being marketed to various segments of customers who seek for better service quality, convenience, efficient transactions, and seeking higher return with relatively less risk (see Dusuki & Abdullah, 2007). The 2007-08 crises raise a number of questions about the safety and efficiency of conventional banks while the Islamic banks were largely insulated from such crises. Similarly, Ahmad (2003) notes that Islamic banks are better in providing micro finance to small scale businesses, mostly run by poor people of the society. Islamic banks can avoid the problems of default and safety of investment which are very high for such loans in conventional banking industry. Islamic banking system provides solutions for the risk management in banking from the "Islamic Law of Contract" which is efficient as well more effective (Obaidullah, 1999).

According to Limam (2001) larger bank size, higher share of equity capital in assets and greater profitability are associated with better efficiency. Limam also points out some other factors e.g. continuous development of human resources through training, cost-saving, financial instruments and technological developments in banking etc. as the necessary factors for Islamic bank efficiency. In a study Mukhtar, Abdullah & Alhabshi, (2008) find that in Malaysia Islamic banking was less efficient than the conventional banks. They found that in Malaysia Islamic and Islamic windows of Conventional banks earn half of the profits that the best-practice bank could make under the same conditions. These inefficiencies were both on the cost and profit side. On the other hand, foreign banks were found to be more

efficient than the Malaysian domestic banks, including Islamic banks. These studies are indicating towards the difficulty face by Islamic banks. These are neither large enough in size like many conventional banks nor they have the liberty to develop new products and services, which are not Shari'ah compliant, to attract consumers. However in an earlier study, Samad & Hassan (2000) find that there is no difference in the economic performance of Islamic and Conventional banks in Malaysia.

Islamic banking is now in tough competition with Conventional banks, as noted by Kaleem & Isa (2003), on every aspect of banking services ranging from securing from deposits to making good quality investments still keeping their distinctive characteristics. Islamic banking in accordance with the Shari'ah precepts, as discussed by Choudhury & Hussain, (2005), is a landmark in new paradigmatic thinking interrelating finance, economy, community and society. Islamic banks are therefore facing this situation of tough competition from Conventional banks still remain Shari'ah compliant and play its role in the socio-economic development of poor societies.

This study attempts to provide insights into Islamic Banking liquidity, profitability, solvency and efficiency as compare to conventional banks performance level in Pakistan. This is done by eliciting, both Islamic and Conventional, banks financial reports of five years, 2007-2011, and financial analysis has been done. The study aims to investigate the following main hypotheses:

H_{A1}: There is a significant difference in the Liquidity position of Islamic and Conventional Banks in Pakistan.

H_{A2}: There is a significant difference in the Profitability position of Islamic and Conventional Banks in Pakistan.

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H$_A$3: There is a significant difference in the Solvency position of Islamic and Conventional Banks in Pakistan.

H$_A$4: There is a significant difference in the level of Efficiency of Islamic and Conventional Banks in Pakistan.

Methodology

This study adopts the methodology used by Kader, Asarpota & Al-Maghaireh (2007). The data used in this study are collected from balance sheets and profit and loss accounts published in annual reports of banks. The data are compiled for 5 Islamic and 5 Conventional Banks each year from 2007-to-2011 period. Financial ratios are used in data analysis for measuring and comparing banks overall performance. The ratios used in this study are grouped under four broad categories; (a) profitability; (b) liquidity; (c) risk and solvency; and (d) efficiency ratios. These four categories comprise of a set of ratios which cover the overall performance of a bank. This study uses a total of 11 financial ratios, falling into the above four categories, to measure a bank's overall performance. The classification of the ratios, their formulae and a brief are given below:

1. Profitability Ratios

The profitability ratios of banks focus on how bank is performing in terms of profit. They are used to assess a bank's ability to generate earnings as compared to its Total Assets, Equity and Mark-up/Interest Income. Having higher value on these ratios represents better performance of banks.

The following three ratios are used in this study to measure the profitability of a bank:

1. Return on Assets (ROA) Ratio = Net Profit before Taxes / Total Assets.

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2. Return on Equity (ROE) Ratio = Net Profit after Taxes / Shareholders' Equity.

3. Profit to Total Interest Revenue Ratio = Net Profit after Taxes / Total Interest Revenues.

2. Liquidity Ratios

For bank, liquidity ratios are the financial ratios which measure a bank's ability to meet its short-term obligations on time. The higher value of the first ratio provides a larger safety that the bank possesses to cover its short-term obligations on time. The lower value of the second ratio, on the other hand, represents a higher level of liquidity.

1. Cash and Portfolio Investment to Deposits Ratio = (Cash + Balances with Other Banks) / Deposits.

2. Advances to Deposits Ratio = Advances / Deposits.

3. Risk and Solvency Ratios

Risk and Solvency ratios provide a measurement of a bank's solvency risk. A bank is considered when it has a considerable amount of total assets and shareholders' equity to meet it total liability (debt).

The following are the commonly used measures for a risk and insolvency.

1. Shareholders' Equity to Total Liability Ratio = Shareholders' Equity/ Total Liability.

2. Total Liabilities to Total Assets Ratio = Total Liabilities / Total Asset

3. Equity Multiplier = Total Asset/Shareholders' Equity.

4. Efficiency Ratios

Efficiency ratios measure the quality of a bank that how efficiently it utilizes its assets to generate total revenue (interest income), net

profit and the level of administrative expense as a ratio of interest income. Following are the three ratios used to measure the efficiency of the banks.

1. Net Operating Margin on Total Assets Ratio= Operating Profit / Total Assets.

2. Total Interest Revenue to Total Assets Ratio = Total Interest Revenue / Total Asset.

3. Operating Efficiency= Administrative Expense / Total Interest Revenue.

For further detail and description of these ratios also see Kader, Asarpota & Al-Maghaireh (2007). Descriptive statistics, like mean standard deviation, maximum, and minimum values are calculated for each ratio. The check whether the financial performance of both sets of banks is different from each other or not F-test is applied to the mean values of the ratios calculated.

Empirical Results and Discussion

This section presents the results and findings of our study. Table 1 and Table 2 show the descriptive statistics for Conventional and Islamic banks, respectively. These two tables provide the minimum, maximum, mean and standard deviation value for all the ratios used in this study. The results show that the Conventional banks, on average, are profitable as both minimum and maximum values for the profitability ratios are positive. These banks are relatively stable as all the ratios show a low value of standard deviation. Conventional banks are having good utilization of assets as well as better operating efficiency. But these banks are relatively less liquid as shown by lower mean value of cash & portfolio investment to deposit ratio. Similarly, conventional banks are less solvent and, therefore,

relatively more risky. Conventional banks, on average, have low value equity to total debt, high value of debt to total assets and high value of equity multiplier.

Table 1:   *Descriptive Statistics of Conventional Banks*

Ratios	Min	Max	Mean	SD
ROA%	1.50	2.03	1.788	.230
ROE%	13.11	15.86	14.092	1.130
Profit-to-Revenue%	12.54	21.45	14.984	3.705
Cash & Portfolio Investment-to-Deposits%	14.38	18.87	16.498	1.804
Advances-to-Deposits%	54.47	71.66	64.064	6.394
Equity -to-Total Debt%	7.92	9.13	8.488	.503
Debt-to-Total Assets%	91.80	92.43	92.028	.250
Equity Multiplier (Times)	13.79	15.13	14.374	.511
Operating Profit Margin%	2.32	2.88	2.462	.235
Asset Utilization (Times)	7.29	9.20	8.562	.780
Operating Efficiency%	29.03	31.81	30.230	1.274

Table 2 provides the descriptive statistics for Islamic banks. It shows the minimum, maximum, mean and standard deviation value for all the ratios used in this study. Islamic banks, on average, have mixed values of profitability. Islamic banks, on average, are less profitable in the period 2007-2011. The values of these banks are showing high standard deviation as compared to Conventional banks. The higher value of standard deviation shows the fluctuation in among different bank and across the time. Similarly, Islamic banks are less efficient as their assets utilization is, on average, low while the operating expense to total revenue value is high. But these banks are, on average, more liquid and less risky as compare to Conventional

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banks. Mean value of cash & portfolio investment as a percentage of deposits is relative high, while debt to total assets and equity multiplier value is relatively low as compare to Conventional banks.

Table 2: *Descriptive Statistics of Islamic Banks*

Ratios	Min	Max	Mean	SD
ROA%	-1.29	.65	-.542	.770
ROE%	-3.51	7.56	.550	4.376
Profit-to-Revenue%	-14.98	4.87	-5.880	7.947
Cash & Portfolio Investment-to-Deposits%	13.94	25.87	18.630	4.400
Advances-to-Deposits%	46.34	76.20	60.546	13.016
Equity -to-Total Debt%	13.61	50.87	28.004	15.169
Debt-to-Total Assets%	69.64	88.29	80.452	7.629
Equity Multiplier (Times)	5.09	10.02	7.408	2.039
Operating Profit Margin%	-1.25	.72	-.488	.772
Asset Utilization (Times)	3.28	5.66	4.706	.982
Operating Efficiency%	50.06	187.16	96.872	52.952

Table 3 shows the main findings of this study. Based on the results it is concluded that during the five years period Conventional banks were on average more profitable as compared to Islamic banks. All the three ratios related to profitability are in favor of conventional banks. All these three ratios are significant at 99% confidence interval. The liquidity ratios are not significantly different for Conventional and Islamic banks. Both Conventional and Islamic banks are nearly equally liquid in the period under this study.

The solvency ratios show that Islamic banks are significantly better than Conventional banks. It means that Islamic banks are significantly less risky as compare to Conventional banks. The equity

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to debt ratio, where a high value means lower risk, for Islamic banks is significantly higher than Conventional banks over the five years period with a 95% confidence interval. The other two ratios, debt to total assets and equity multiplier, related to solvency are significantly lower for Islamic banks as compare to Conventional banks. These two ratios are also statistically significant at 95% and 99% confidence interval.

Table 3:   *Paired Samples Test*

		Paired Differences		t-values	Sig. (2-tailed)
			Std. Error		
Ratios		SD	Mean		
Difference between Conventional bank and Islamic bank ratios					
Pair 1	ROA.CB – ROA.IB	.659	.295	7.91	.001
Pair 2	ROE.CB – ROE.IB	3.910	1.749	7.74	.001
Pair 3	Profit-to-Rev.CB – Profit-to-Rev.IB	7.407	3.312	6.30	.003
Pair 4	CashPortfolio-to-Deposits.CB – CashPortfolio-to-Deposits.IB	2.886	1.291	-1.65	.174
Pair 5	Advances-to-Deposits.CB – Advances-to-Deposits.IB	8.052	3.601	.98	.384
Pair 6	Equity-to-Total Debt.CB – Equity-to-Total Debt.IB	14.782	6.610	-2.95	.042

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Pair 7	Debt-to-Total Assets.CB - Debt-to-Total Assets.IB	7.618	3.407	3.40	.027
Pair 8	Equity Multiplier.CB - Equity Multiplier.IB	2.349	1.050	6.63	.003
Pair 9	Operating Profit Margin.CB - Operating Profit .Margin.IB	.762	.341	8.66	.001
Pair10	Asset Utilization.CB – Asset Utilization.IB	.509	.228	16.93	.000
Pair11	Operating Efficiency.CB – Operating Efficiency.IB	51.915	23.217	-2.87	.045

The last set of ratios, comprises of three ratios, is related to the operating efficiency of both types of banks. The results show that over the five years period the operating efficiency of Conventional banks are significantly better than Islamic banks. Operating profit margin and assets utilization for conventional banks are significantly better than Islamic banks at 99% confidence interval. The last ratio of operating efficiency, measured as administrative expense-to-interest revenue, is high for Islamic bank as compare to conventional banks and the results are statistically significant at 95% confidence interval. The results of our study are not consistent with some of the studies conducted in this field. A number of studies concluded that Islamic banks are more profitable, liquid, efficient and less risky as compare

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to Conventional banks (Obaidullah, 1999, Sarker, 1999, Ahmad, 2003, Yudistira, 2004, Dusuki & Abdullah, 2007). But most of these studies were carried out at times when world economies were steadily growing. Since most of the Islamic banks are relatively small size firms therefore a little increase in their revenues resulted in above the average performance for Islamic banks.

On the other hand there are some studies which find no significant difference in the performance of Islamic and Conventional banks (Samad & Hassan, 2000, Bader et *al.,* 2008, Charap, 2011). But there also some studies which concluded that the performance of Islamic banks is poor as compare is Conventional bank (Kamaruddin *et al.,* 2008, Alhabshi, 2008, Johnes *et al.,* 2009). The results of this study can be justified in the scenario of world economic crisis, especially banking crisis of 2007-2008. Islamic banks are relatively small in size therefore these banks were unable to sustain the crisis situation. As a result their performance was significantly lower than their Conventional counterparts in the post crisis environment. The liquidity position of both types of banks was not significantly different from each other. This may be associated to the statuary requirement of the State Bank of Pakistan. Similarly, Islamic banks are significantly less risky as compare to Conventional banks. This may be associated to the relatively less reliance on the debt based contracts in Islamic banks. Therefore, the solvency ratios for Islamic banks are significantly better than Conventional banks.

Conclusion and Future Research Direction

Based on the results of this study it is concluded that in the post banking crisis environment, the profitability, solvency and efficiency of conventional banks is significantly different from Islamic banks

while their liquidity is not significantly different over the study period. Based on the five years data it is evident that Conventional banks are significantly more efficient and profitable but Islamic banks are significantly less risky. But the liquidity of both types of banks is not significantly different. These findings are consistent with some of the studies already conducted in this area. The findings of this study are very important as these are based on the data of period immediately following the global banking crisis. The current study is based on a small sample size and a short time period which can be improved in the future studies in this field. Similarly, the ratios are calculated based on arithmetic mean which may not be an appropriate measure. In the future studies researchers can use better measure like value weighted mean which assigns more weight to large size firms. As future research, both Islamic and Conventional bank comparison can be further study in term of economic value, risk and return on the basis market price of the shares. Such adjustments can make the findings more meaningful and researchers can draw better inferences. As Islamic banks are at the development stage so real research work is needed in term of development of true Islamic financial products to provide a complete alternative banking system to all walks of the society. Such developments can truly improve the financial performance of Islamic banks in Pakistan. However, Islamic banks are growing well but these banks are facing a challenging task in Pakistan.

References

Ahmad, A., & Saif, M. I. (2010). Islamic Banking Experience of Pakistan: Comparison between Islamic and Conventional

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Banks. *International Journal of Business and Management*, *5*(2), 137-143.

Ahmed, H. (2004). Frontiers of Islamic Banking: A Synthesis of Social Role and Microfinance. *The European Journal of Management and Public Policy*, *3*(1), 120-140.

Akhigbe, A., & McNulty, J. E. (2003). The profit efficiency of small US commercial banks. *Journal of banking & finance*, *27*(2), 307-325.

Allen, L., & Rai, A. (1996). Operational efficiency in banking: An international comparison. *Journal of Banking & Finance*, *20*(4), 655-672.

Altunbaş, Y., Gardener, E. P., Molyneux, P., & Moore, B. (2001). Efficiency in European banking. *European Economic Review*, *45*(10), 1931-1955.

Ariff, M. (1989). Islamic banking in Malaysia: framework, performance and lessons. *IIUM Journal of Economics and Management*, *2*(2), 67-78.

Ariff, M. (2006). Islamic banking a variation of conventional banking. *Monash Business Review*, *4*(3).

Bader, M. K. I., Mohamad, S. H. A. M. S. H. E. R., Ariff, M., & Hassan, T. (2008). Cost, revenue and profit efficiency of Islamic versus conventional banks: international evidence using data envelopment analysis. *Islamic Economic Studies*, *15*(2), 23-76.

Berger, A. N., & Humphrey, D. B. (1997). Efficiency of financial institutions: International survey and directions for future research. *European journal of operational research*, *98*(2), 175-212.

Berger, A. N., & Mester, L. J. (2003). Explaining the dramatic changes in performance of US banks: technological change, deregulation, and dynamic changes in competition. *Journal of Financial Intermediation*, *12*(1), 57-95.

Bergman, U. M. (1999). Do monetary unions make economic sense? Evidence from the Scandinavian Currency Union, 1873–1913. *The Scandinavian Journal of Economics*, *101*(3), 363-377.

Bikker, J. A., & Groeneveld, J. M. (2000). Competition and concentration in the EU banking industry. *Kredit und Kapital*, *33*(1), 62-98.

Brown, K. (2003). Islamic banking comparative analysis. *The Arab Bank Review*, *5*(2), 43-50.

Caprio, G., & Klingebiel, D. (1996). *Bank insolvencies: cross country experience*. World Bank Publications.

Casu, B., & Girardone, C. (2002). A comparative study of the cost efficiency of Italian bank conglomerates. *Managerial Finance*, *28*(9), 3-23.

Cevik, S., & Charap, J. (2011). *The Behavior of Conventional and Islamic Bank Deposit Returns in Malaysia and Turkey*. International Monetary Fund.

Choudhury, M. A., & Hussain, M. M. (2005). A paradigm of Islamic money and banking. *International Journal of Social Economics*, *32*(3), 203-217.

Claessens, S., & Laeven, L. (2004). What drives bank competition? Some international evidence. *Journal of Money, Credit and Banking*, 563-583.

www.man

Claessens, S., Demirgüç-Kunt, A., & Huizinga, H. (2001). How does foreign entry affect domestic banking markets?. *Journal of Banking & Finance*, *25*(5), 891-911.

Crystal, J., Dages, B., & Goldberg, L. (2006). Does foreign ownership contribute to sounder banks in emerging markets? The Latin American experience. *The Latin American Experience (September 2001). FRB of New York Staff Report*, (137).

Dusuki, A. W., & Abdullah, N. I. (2007). Why do Malaysian customers patronise Islamic banks?. *International Journal of Bank Marketing*, *25*(3), 142-160.

Fethi, M. D., Jackson, P. M., & Weyman-Jones, T. G. (2001). An empirical study of Stochastic DEA and financial performance: the case of the Turkish commercial banking industry.

Gait, A., & Worthington, A. (2008). An empirical survey of individual consumer, business firm and financial institution attitudes towards Islamic methods of finance. *International Journal of Social Economics*, *35*(11), 783-808.

Green, C. J., Murinde, V., & Nikolov, I. (2004). The efficiency of foreign and domestic banks in Central and Eastern Europe: Evidence on economies of scale and scope. *Journal of emerging market finance*, *3*(2), 175-205.

Hutchison, M. M. (2002). European banking distress and EMU: institutional and macroeconomic risks. *The Scandinavian Journal of Economics*, *104*(3), 365-389.

Hutchison, M., & McDill, K. (1999). *Are all banking crises alike?: the Japanese experience in international comparison*.

www.man

Iqbal, M. (2001). Islamic and conventional banking in the nineties: a comparative study. *Islamic Economic Studies*, *8*(2), 1-27.

Iqbal, M., Molyneux, P., & Conermann, S. (2006). Thirty Years of Islamic Banking. History, Performance and Prospects. *Bankhistorisches Archiv*, *32*(2), 155-158.

Johnes, J., Izzeldin, M., & Pappas, V. (2009). The efficiency of Islamic and conventional banks in the Gulf Cooperation Council (GCC) countries: An analysis using financial ratios and data envelopment analysis. *LUMS Working Papers Series 2009/023*.

Juan-Ramon, V. H., Randall, R., & Williams, O. (2001). *A Statistical Analysis of Banking Performance in the Caribbean Currency Union in the 1990s* (Vol. 1). International Monetary Fund.

Kader, J. M., Asaporta, A. J., & Al-Maghaireh, A. (2007). Comparative Financial Performance of Islamic Banks vis-à-vis conventional Banks in the UAE. In *Proceeding on Annual Student Research Symposium and the Chancellor's Undergraduate Research Award, http://sra. uaeu. ac. ae/CURA/Proceedings*.

Kaleem, A., & Isa, M. M. (2003). Casual relationship between Islamic and conventional banking instruments in Malaysia. *International Journal of Islamic Financial Services*, *4*(4), 1-8.

Kamaruddin, B. H., Safab, M. S., & Mohd, R. (2008). Assessing production efficiency of Islamic banks and conventional bank Islamic windows in Malaysia. *International Journal of Business and Management*, 1(1), 31-48.

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Karsten, I. (1982). Islam and Financial Intermediation. *Staff Papers-International Monetary Fund*, 108-142.

Kraft, E., & Tırtıroğlu, D. (1998). Bank efficiency in Croatia: A stochastic-frontier analysis. *Journal of Comparative Economics*, *26*(2), 282-300.

Kwan, S. H. (2003). Operating performance of banks among Asian economies: An international and time series comparison. *Journal of Banking & Finance*, *27*(3), 471-489.

Limam, I. (2001). *Measuring technical efficiency of Kuwaiti banks*. Arab Planning Institute.

Mehmood, A. (2002). Islamisation of economy in Pakistan: past, present and future. *Islamic studies*, *41*(4), 675-704.

Mohamad, S., Hassan, T., & Bader, M. K. I. (2008). Efficiency of conventional versus Islamic Banks: international evidence using the Stochastic Frontier Approach (SFA). *Journal of Islamic Economics, Banking and Finance*, *4*(2), 107-130.

Mokhtar, H. S. A., Abdullah, N., & Alhabshi, S. M. (2008). Efficiency and competition of Islamic banking in Malaysia. *Humanomics*, *24*(1), 28-48.

Molyneux, P., Lloyd-Williams, D. M., & Thornton, J. (1994). Competitive conditions in European banking. *Journal of banking & finance*, *18*(3), 445-459.

Mukherjee, A., Nath, P., & Pal, M. (2003). Resource, service quality and performance triad: a framework for measuring efficiency of banking services. *Journal of the Operational Research Society*, *54*(7), 723-735.

Obaidullah, M. (1999). Islamic Risk Management: Towards Greater Ethics and Efficiency. *International Journal of Islamic Financial Services,* 3(4), 295-311.

Parker, D., Nellis, J. G., & Figueira, C. (2007). Does ownership affect the efficiency of African banks?. *The Journal of Developing Areas*, *40*(1), 37-62.

Samad, A. (1999). Relative Performance of Conventional banking vis-à-vis Islamic Bank in Malaysia. *IIUM Journal of Economics and Management*, *7*(1), 1-25.

Samad, A., & Hassan, M. K. (2000). The performance of Malaysian Islamic bank during 1984-1997: an exploratory study. *Thoughts on Economics*, *10*(1-2), 7-26.

Sarker, M. A. A. (1999). Islamic banking in Bangladesh: performance, problems, and prospects. *International Journal of Islamic Financial Services*, *1*(3), 15-36.

Skully, M., & Brown, K. (2006). Financial Performance of Islamic Banks. In *17th Asian Finance Association meeting, Auckland*.

Yudistira, D. (2004). Efficiency in Islamic banking: an empirical analysis of eighteen banks. *Islamic Economic Studies*, *12*(1), 1-19.

Zaidi, N. A. (1991). Performance of banks under a non-interest system. *Journal of Islamic Banking and Finance*, *8*(1), 42-50.