

## **How did listed Islamic and Traditional Banks Performed: pre and post the 2008 financial crisis?**

**Mohamed H. Rashwan<sup>1</sup>**

### **Abstract**

This study tests the efficiency and profitability of banks that belongs to two different sectors: a) Islamic Banks (IBs) and b) Traditional Banks (TBs). The study concentrates on the pre and post 2008 financial crisis with an aim to test if there are any significant differences in performance between the two sectors. The study applies the MANOVA techniques to analyze the financial secondary data for only publicly traded banks in the same region.

The findings of the study show that there is a significant difference between the two sectors in 2007 and 2009 and there are no significant differences in 2008, which indicates the effect of the crisis on both sectors. IBs outperform TBs in 2007 and TBs outperform IBs in 2009. This result indicates the spread of the crisis to the real economy where IBs usually operate.

**JEL classification numbers:** B19, C12, G21

**Keywords:** Islamic Banking, Traditional Banks, Financial Crisis, MANOVA

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<sup>1</sup> Institute of Islamic World Studies (IIWS), Zayed University, UAE,  
e-mail: Mohamed.Rashwan@zu.ac.ae

## 1 Introduction

Forty years ago Islamic Finance was virtually an unknown system; interestingly it has expanded to become a distinctive and fast growing segment of the International Financials markets. With a growth rate that ranges from 15% to 20% [1]. Islamic Finance in general and Islamic banking in specific become main players in the financial world. According to the IMF survey [2] the total capital managed under Islamic Finance systems was estimated to be \$820 billion at the end of 2008. More than 200 Islamic Banks operate in over than 70 countries concentrated in the MENA region and many western countries [3]. Obviously, the Islamic Banking sector attracts more attention during the financial crisis started in 2008. This attention is justified by the minor effect of the crisis on the financial institutions that comply to Islamic sharia'a (laws) [4]. In theory the Islamic Banks should not be involved in activities prohibited by Sharia'a. According to Shanmugam and Zahari [5] the ownership and trading of a physical good or service is a critical element in structuring Islamic financial products and selling or buying debts is not allowed. However, the 2008 financial crisis main reason was the excessive and imprudent lending by banks as stated in the 2008 report of the Bank of International settlement. In addition to the mispricing in the massive credit default swaps market (CDS) which has been estimated to be \$55 trillion over 4 times the publicly traded corporate and mortgage U.S debt supposed to insure [6].

The collapse in the credit markets didn't affect the Islamic Banks directly as they were out of this market. This study aims to analyze, test and compare the financial performance of Islamic Banks (IBs) with the Traditional Banks (TBs) pre and post the 2008 financial crisis.

The relevant research in institutional economics distinguishes between traditional and Islamic banking as different institutional arrangements. This paper addresses this perspective using a critical economic event which is the financial crisis in 2008. The paper, then, examines the extent to which traditional and/or Islamic

banking are able to face economic changes.

The rest of the paper is organized as follows. *Section 1* provides a background about a) Islamic banking mechanism highlighting the differences between IBs and TBs. *Section 2* discuss the aspects of banks financial crisis. Section 3 outlines the methodology and data analysis. Section 4 analyzes the results. Section 5 offers recommendations for future research.

## **2 Islamic Banking**

### **2.1 History**

The original teachings of Judaism, Christianity, and Islam prohibit lending money and charging interest. The term “Usury” was used to indicate paying a rent for the use of money; the meaning was changed to mean, in today’s language, lending at an excessive interest rate (this is different than Riba which is defined as any increase on loans regardless of the rate of interest charged).

It is also interesting to note that charging interest is prohibited in Buddhism, Hinduism, and many other faiths and philosophies [7]. Islamic Finance as terminology refer to finance system complying with Sharia’a laws that were introduced by prophet Mohamed (Peace Be Upon Him) in the sixth century with its main two sources Quran (the holy book of Islam) and Sunnah (also known as prophet’s sayings or Hadith). After the prophet death, Islamic scholars and Jurists depended on other sources like Ijmaa (consensus), Qias (Analogy) and Ijthad (Diligence). The Islamic based financial transactions continued until the sixteen century [8]. In the seventeenth century and because of the colonization, this Islamic banking system was replaced by the western banking system (i.e. Traditional) [9].

In the last century, initiations for developments in Islamic finance took place in the early 1930s and continued to 1960s, this development and thought remain

theoretical. On the operation level, the first bank that operated according to Islamic Sharia'a was that of Mit Ghamar in Egypt, which started in 1963 and closed down in 1967. Meanwhile, there was another trial started in Malaysia in the form of saving and investments complied with Sharia'a but with a special purpose of funding pilgrims. The accumulated intellectual and theoretical knowledge during the 1960s and early 1970s had laid the ground for the first private Islamic bank (Dubai Islamic Bank). Also, the Islamic Development Bank (IDB) a multinational bank started operation in the early 1970s. Since then, the Islamic Finance grows in an increasing rate to reach a growth rate of 15% in 2005 [1-15] .

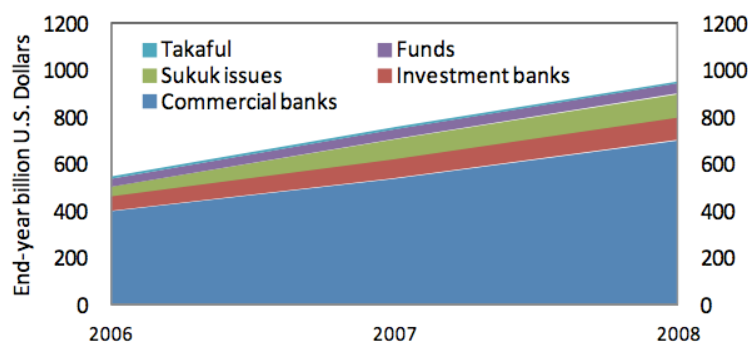


Figure 1: Global assets of Islamic Finance<sup>2</sup>

Islamic Finance services expanded to include almost all the Financial Services that comply with Sharia'a laws as Investment Funds, Assets Management and Insurance companies (also known as Takaful) even Dow Jones and FTSE created their own indices for securities complied with Sharia'a. According to Mayia and Banerjee [10], the total deposit complied with Islamic Sharia'a is expected to grow with 19.18% in 2011. Islamic Banking reached its peak in 2008 with almost \$850 billion in assets distributed among 70 countries with a

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<sup>2</sup> Source: international Financial Services London.

concentration of 65% in the Middle East [2]. It is worth mentioning that a large number of traditional banks are providing Islamic products through their Islamic windows such as HSBC, CitiBank and UBS. Figure (1) illustrates the growth of Islamic Finance assets allocated by type.

## 2.2 Islamic Banking Vs Traditional Banking

There are common features between Islamic Banking and Traditional Banking namely both of them plays the role of financial intermediaries in reducing the Asymmetric Information and moral Hazard. The most obvious distinguished feature of Islamic Banking and/or Finance is its adherence to Sharia'a principles. According to Islamic jurisprudence, if there is no clear evidence for prohibition so the transaction is allowed by default, as a result this basic rule allows for great flexibility in the Islamic Finance development. i.e scholars investigate only if the transaction is not forbidden then it can be applied if it passes this investigation. The great Islamic scholars Ibn Tayymiaa (d. 1328 C.E) famously stated that the two prohibitions which explain all distinctions between contracts that deemed valid or invalid are those of *Riba* and *Gharar*, the former means any unjustifiable increase of capital whether in loans or sales (fixed interest rate) and the latter is the speculative behavior and it encompasses any transactions featuring extreme uncertainties and/or gambling [11].

As a consequence for those two prohibitions (*Riba and Gharar*) scholars and jurists framed some rules that become a basics in the Islamic Finance theory and they serve as major guidelines for the profession such as: Money is not a commodity but a medium of exchange, a store value and a unit of measurement, it represents purchasing power and cannot be utilized to increase purchasing power without any productive activity, which means that wealth creation should be through trade and commerce and Islamic financial transactions must be accompanied by an underlying productive economic activity that will generate

legitimate income. Another common principle is *Risk Sharing* (Practitioners call it PLS or Profit and Loss Sharing) and it implies that suppliers of funds are investors not creditors as fixed rate is forbidden. Furthermore, disclosure of information is a sacred duty in all the contractual obligations. Lastly but not least all activities should maintain the social justice and avoid exploitation. All these principles should be interpreting it under the Sharia'a main objectives (also known as *Makisd el Sharia'a*). Figure 2 summarizes the main principles of Islamic Banks mechanism.

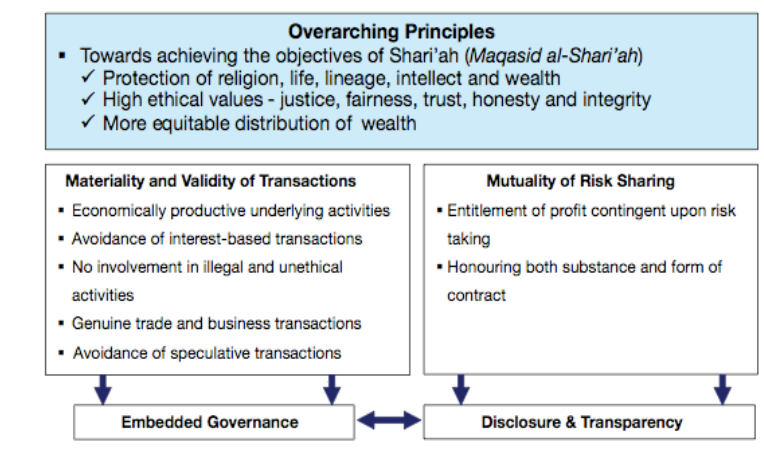


Figure 2: Islamic Banks Principles<sup>3</sup>

The TBs differ in theory and practice from IBs; most of the differences can be summarized by stating that TBs system is a debt-based and it allows for risk transfer. While IBs is asset-based and it allows for risk sharing [12]. A comparison between Traditional and Islamic banking system is described in Table 1.

<sup>3</sup> Source: Islamic Finance and Global Financial Stability report 2010.

Table 1: A comparison between Islamic and Traditional Banking<sup>4</sup>

Characteristic	Islamic Banking System	Traditional Banking System
Business framework	Functions and operating modes are based on Sharia'a, and Islamic banks must ensure that all business activities are in compliance with sharia'a requirements.	Functions and operating modes are based on secular principles, not religious laws or guidelines.
Interest charging	Financing is not interest ( <i>Riba</i> ) oriented and should be based on risk-and-reward sharing.	Financing is interest oriented, and a fixed or variable interest rate is charged for the use of money.
Interest on deposits	Account holders do not receive interest ( <i>Riba</i> ) but may share risk and rewards of investments made by the Islamic bank.	Depositors receive interest and a guarantee of principal repayment
Risk sharing in equity financing	Islamic banks offer equity financing with risk sharing for a project or venture. Losses are shared on the basis of the equity participation, whereas profit is shared on the basis of a pre-agreed ratio.	Risk sharing is not generally offered but is available through venture capital firms and investment banks, which may also participate in management
Restrictions	Islamic banks are allowed to participate only in economic activities that are Sharia'a compliant. For example, banks cannot finance a business that involves selling pork or alcohol.	Traditional banks may finance any lawful product or service.
Zakat (religious tax)	One of the functions of the Islamic banks is to collect and distribute zakat.	Traditional banks do not collect any religious tax.
Penalty on default	Islamic banks are not allowed to charge penalties for their enrichment. They may, however, allow imposition of default or late-payment penalties on the grounds that these penalties discourage late payments or defaults, which impose administrative costs on banks for processing and collecting the	Traditional banks normally charge additional money (compound interest) in case of late payments or defaults.

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<sup>4</sup> Source: The Research Foundation of CFA Institute

	amount owed. Penalties may be donated to a charity or used to offset collection cost.	
Avoidance of gharar	Transactions with elements of gambling or speculation are discouraged or forbidden.	Speculative investments are allowed.
Customer relationships	The status of an Islamic bank in relation to its clients is that of partner and investor.	The status of a traditional bank in relation to its clients is one of creditor and debtor.
Sharia'a supervisory board	Each Islamic bank must have a supervisory board to ensure that all its business activities are in line with Sharia'a requirements.	Traditional banks have no such requirement
Statutory requirements	An Islamic bank must be in compliance with the statutory requirements of the central bank of the country in which it operates and also with Sharia'a guidelines.	A traditional bank must be in compliance with the statutory requirements of the central bank of the country in which it operates and in some places, the banking laws of state or other localities.

From another point of view, it is important to document the critique of some scholars regarding the differences between the two systems. They believe that those differences are only in theory and not in practice (i.e. the differences is only in the terminology). Chong and Liu [13] conducted a study on the IBs in Malaysia and found that Islamic banking is not very different from traditional banking from the perspective of the PLS paradigm. Hamoudi [14] debated that modern Islamic rules are not based on or even a renewal to the classical era rules as it is supposed to be, rather they are largely the product of mediation among competing influences in Muslim society, this reflects the Muslim society needs to engage the international community in order to develop power and influence. Moreover, El-Gamal [15] in his influential analysis claimed that the IBs industry is selling overpriced financial products to the religiously and financially naive and that some of the product differentiation between Islamic and traditional financial products appears to be minor differences if any. Saleem [16] also made the same



critiques towards IBs system.

A good portion of the practitioners believes that certain financing methods with predetermined markups, or profit margins, involved limited risk-and-reward sharing. Thus resemble fixed- interest lending in significant ways, which is a clear deviation from the basic aim of IBs. In other words, (IBs) should operate more with (PLS) instruments and pursue its social and economic role instead of imitating the traditional tools even if its sharia'a complied ones. A recent study analyzed the default of the *Nakheel* Company in Dubai. The study found that the legal implications of the *Nakheel Sukuk* (the Islamic alternative for bonds) were not connected to the legal structure of Islamic financial instruments as such. However, they were inherent to the legal structure of this particular transaction and to the legal environment in which it was set up [17].

As a conclusion, Islamic Banks are seeking profit but without violating sharia'a principles and laws (at least in theory). This sometimes leads to an overlap intentionally or unintentionally with the traditional banking system mechanisms.

### **2.3 Financial Crisis**

At its meeting in 30 November and 1 December 2010, the Basel Committee on Banking Supervision agreed on the details of the Basel III rules text, which includes global regulatory standards on capital adequacy and liquidity. The liquidity coverage ratio and the net stable funding ratio will be subject to an observation period and will include a review clause to address any unintended consequences. This press release on December, 1st 2010 reflects the serious reactions of international bodies, i.e.the Bank of International Settlement (BIS), International Monetary Fund (IMF) and World Bank (WB) [18].

*The financial crisis 2008* was perceived as the most severe since the great depression in 1923.

In the recent crisis, the world had a housing boom and bust which in turn led to financial turmoil in the United States and other countries [19]. The effect of the financial crisis touched all the sectors in almost all the countries. Banks and insurers around the world have reported \$1.1 trillion of losses, which led to central banks, and governments in the U.S., U.K. and Europe have provided \$9 trillion of support to financial institutions to prevent the collapse of global financial markets [20].

The banking sector was the most affected at least in the early stages of the crisis. According to The 2010 report of the International Bank for Reconstruction and Development (World Bank affiliation), when the crisis struck in September 2008, the U.S economy slumped with a double downward spiral. As a result, banks and other financial institutions restricted credit and households reduced their spending. The decline in the real economy followed soon after which led to a further damage on the balance sheets of banks and financial institutions starting another turn in the spiral. The size and speed of the collapse created a situation of extreme uncertainty. The output of this downturn is the spreading of risk averse behavior as the investors as well as consumers became more conservative. That led to a shrinkage in the global automobile industry and durable goods, to name a few.

Even in the Gulf Cooperation Council (GCC), which is characterized by excess liquidity and more stability because of their dependency on the oil production, the effect of the crisis was remarkable. The oil prices and production fell dramatically; stock and real estate markets plunged as expected consequences. The total governments spending declined. It is estimated to be a decline of \$2.5 trillion in projects at different stages of planning and implementation at end-2008. In addition to approximately \$575 billion had been placed on hold by end-2009, Interestingly banks in the CCG remained profitable [21].

The crisis was originated in the developed financial systems mainly it started from the US market but it ended up affecting almost all the global economy. It

will have a long lasting effects and maybe the European debt crisis that is evolving is just a sign about this long-term effect.

## **2.4 Bank Performance**

The aim of this study is to test and compare the performance of Islamic Banks (IBs) versus Traditional Banks (TBs). Generally, the early attempts to study IBs focused on the conceptual analysis and tried to explain the Sharia'a compliance tools and products [22-23]. A very few research have focused on the policy implications of eliminating interest payments [24-25]. Haron [26] examined the effect of competition and some other external factors on the profitability of Islamic banks and found out that Islamic banks in competitive markets earned more than those which operate in a monopolistic markets. Evidence was also found to support the hypothesis that the profit-loss sharing principle practiced by Islamic banks is beneficial to both depositors and the banks.

In the last decades, several attempts, research and surveys were conducted to measure the performance of IBs. Samad and Hassan [27] applied financial ratios analysis to see the performance of a Malaysian Islamic bank over the period 1984-1997 and they found that bankers' lack of knowledge was the main reason for slow growth of loans under profit sharing Performance measure. Yulistira [28] studied the performance of 18 IBs over the period 1997 -2000 using the Data Envelopment Analysis (DEA), his results suggest that Islamic banks suffered from slight inefficiencies during the global crisis in 1998-9. Another study conducted by Hussein [29] aimed at comparing the profit efficiency of Islamic versus conventional banks in Bahrain and the findings showed that in general, Islamic banks outperform their conventional counterparts. Whereby Islamic banks are able to gain 75% of their potential profits while conventional banks earn 66% of a best-practice bank would earn.

Rosly and AbuBakr [30] conducted a study to test the performance of IBs

and TBs in Malaysia, they found that despite the fact the IBs return on assets (ROA) is higher in IBs but this didn't imply higher efficiency. The importance of this particular study is the analysis of how IBs depended on interest-like products (credit finance) is less likely to outperform TBs on efficiency terms. A research done by Bashir [31] aimed at analyzing IBs in the Middle East. The analysis confirmed that the capital-to-asset and loan-to-asset ratios lead to higher profitability while controlling for macroeconomic environment. Notice that the term *Loan* is used generically to mean profit-loss-sharing (PLS) or equity financing in IBs as the regular Loans are not allowed by Islamic Sharia'a. [32] compared between the IBs and TBs internationally using the *X-Efficiency* metric for a random sample of 81 banks 50 belonged to TBs and 31 belonged to IBs, the results showed that IBs outperformed TBs on average.

Few empirical studies were conducted since the financial crisis started in 2008. Khan et al. (2009) provided a conceptual frame work for avoiding such a crisis depending on the Islamic Finance principles. However, the study lacked the empirical proof of these thoughts. Using the same conceptual analysis, Farouk [34] provided a framework of embedding financial assets backed security in the financial system to replace the traditional one. Recently, Al-Ajlouni [35] study concluded that the financial globalization will have negative effects on Islamic banks autonomy, profit margin and competitive position. It will also enhance the Islamic banks' ability to create new investments, liquidity management Instruments and methods, and develop the existing ones. The researcher suggested some strategies to be adopted by the IBs so they can compete in the international markets after the crisis.

Two major empirical studies were conducted lately, Khamis et al. [21] studied the banks in the (GCC) and showed IBs were less affected than TBs by the initial impact of the global crisis (the first wave). However, in 2009 the IBs Profitability declined more than the TBs which could be attributed to the second wave of the crisis which hit the real economy. The second major study done by

Hassan and Dridi [12] confirmed the same result. Their analysis suggested that IBs fared differently than TBs during the global financial crisis. The IBs mechanism (complying with Islamic Sharia'a) helped in reducing the negative impact on profitability in 2008, while weaknesses in risk management practices in some IBs led to larger decline in profitability compared to TBs in 2009. In particular, adherence to Sharia'a principles precluded IBs from financing or investing in the kind of instruments that have adversely affected their Traditional competitors and triggered the global financial crisis. On the contrary to Khamis et al. [21], the study of Hassan and Dridi [12] suggested that IBs in general prove a better resilient to the crisis as the profit of IBs in 2008-09 was almost equal to TBs. This indicated an efficient fund cumulative practice before and after the crisis. Interestingly, IBs assets grow twice as the TBs, which reflect the better rating of the IBs than the TBs.

As mentioned, this study aims at empirically comparing between the performance of IBs and TBs in an attempt to add to the few limited literature conducted since the financial crisis of 2008.

### **3 Research methods and Data Analysis**

#### **3.1 Data**

Bank level data was collected using *BankScope* database, which provides a standardized measure in terms of currencies (US dollars) and ratios (variables). In determining the sample, the researcher set the database to select the top 50 listed banks in both sectors. However, this process rendered 46 IBs covering 15 countries (Saudi Arabia, Iran, Kuwait, Qatar, United Arab of Emirates, Bahrain, Turkey, Egypt, Pakistan, United Kingdom, Bangladesh, Sudan, Syria, Palestine and Jordan). TBs was 49 in the same countries. The rationale behind analyzing only the *listed banks*, is that the financial data related to the publicly traded institutions are more accurate because of the adherence to more restricted rules in

terms of capital, practice, governance and disclosure. Choosing both samples from the same countries aimed to controlling of the *macroeconomic* variables. Figures 3a and 3b compare between the value of total assets (TA) and net income (NI) respectively in both sectors in years 2007-09.

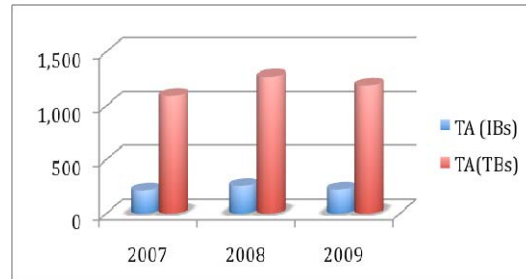


Figure 3(a): Total Assets

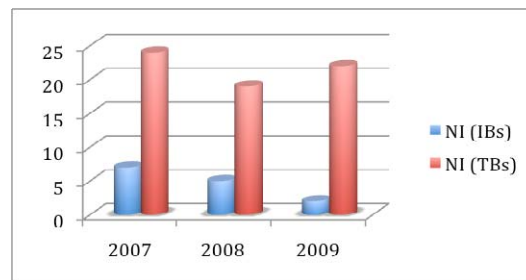


Figure 3(b): Net Income

For the IBs, the total assets increased in 2008 by 20% then decreased in 2009 by 13%. While the net income decreased in 2008 by 21% and in 2009 by 6%. The TBs total assets increased by 16% in 2008 than dropped by 6% in 2009. The net income for TBs decreased by 21% then rebalanced with an increase of 18%.

### 3.2 Variables

Following Cole [36], Macdonald and Koch [37] and Madura [38], the study applied four variables to test the bank performance: Return On Average Assets (ROAA), Return On Average Equity (ROAE), Net Loan to Total Assets (NL/TA) and Loan Loss Reserve to Gross Loan (LLR/GL).

As mentioned before, *loan* term in IBs is a synonym for profit and loss sharing. Table 2 shows the average of all the applied variables per year. The ROAA and ROAE decreased in both sectors with a slightly more in the IBs. The reserves in the IBs are higher than in TBs across the three years. Finally the NL/TA increased in 2008 and dropped to reach the pre-crisis level in both sector.

Table 2: Mean and Standard deviation of variables (%)per year

IBs	2007		2008		2009		TBs	2007		2008		2009	
	Mean	Sd	Mean	Sd	Mean	Sd		Mean	Sd	Mean	Sd	Mean	Sd
ROAA	4.17	4.94	1.73	4.22	-1.1	7.7	ROAA	2.56	0.8	1.79	1.6	1.68	0.9
ROAE	16.8	14.1	10.6	14	-1.2	26	ROAE	21.6	6.7	14.08	24	14.26	8.9
LLR/GL	4.56	4.82	5.17	5.03	9.8	14	LLR/GL	3	1.8	3.03	2	4.44	2.5
NL/TA	42.78	28	46.98	27	42.07	27	NL/TA	55.83	9.2	60.83	8.9	58.57	9

### 3.3 MANOVA

The Multivariate analysis of Variance is designed to analyze the relation between different dependent variables (outcomes) simultaneously and that's why it is called *multivariate*. It has the power to detect whether groups differ along a combination of dimensions and it is a two stage test in which an omnibus test is first performed before more specific procedures are applied to tease apart group differences [39]. According to Hubert and Morris [40]. MANOVA should be used

when the researcher needs to control of experiment error rate and at least some degree of correlation is present among the dependent variables. Moreover, MANOVA will be more powerful than the separate univariate tests as it may detect combined differences and may provide dimensions of differences that can distinguish among the groups better than single variables [41]. Nevertheless, a debate exists around MANOVA *power*. According to Ramsey [42] as the correlation between dependent variables (DVs) increased, the power of MANOVA decreased. Tabachnick and Fidell [43] recommended that MANOVA should be used with highly negatively correlated DVs but it's well acceptable with moderately correlated DVs in either direction (positive or negative). On the contrary, Steevens (1989) investigated the same relation between the correlation and the power. It found that the power with high intercorrelations is in most cases greater than that for moderate intercorrelations if it's not higher. Cole et al. [36] did a great effort to clarify this relationship. They found that the power of MANOVA depends on a combination of the correlation between dependent variables and the *effect size*. In other word, if the researcher expecting to find a large effect, then MANOVA will have a greater power if the measures are somewhat different and if the group differences are in the same direction for each measure. In short, a researcher should consider not just the intercorrelation of DVs but also the size and pattern of group differences expects to get. There are *four* statistical tests in MANOVA (equivalent to *F* - ratio in ANOVA): *Pillai – Barlett trace (V)*, *Hotteling's (T<sup>2</sup>)*, *wilks's lambda (Λ)* and *Roy's largest root*. According to Stevens [44] for small and moderate sample sizes; the four statistics differ little in terms of power. This study opted to use *wilks's lambda (Λ)* following Cinca [45], Karacaer and Kapusuzoğlu [46] and Chung et al. [47]. However, in this study all the test statistics rendered the same results.



### 3.4 Statistical Analysis

The study aims at comparing between IBs and TBs pre and post the 2008 financial crisis in an attempt to measure and contrast their performance. The selected study period is 2007, 2008 and 2009. These years are the dependent variables (DVs) for each of the four indicators: ROAA, ROAE, NL/TA and LLR/TL. The independent variable (IDV) is constructed as dummy variable where IBs and TBs were assigned 1 and zero respectively. All the variables are standardized using the Z-scores to have a normalized pattern to satisfy MANOVA assumption that each dependent variable should be a multivariate normal.

The analyses go through 3 stages: stage one is *Multivariate* tests. The null hypothesis for this stage is that there exists equality among groups on linear combinations of the dependent variables. Stage two includes *Univariate ANOVA* (tests of *between- Subjects Effects*). The null hypothesis is based on the idea that there are no in-between group differences. Stage three is the *Pairwise Comparisons* with the null hypothesis that there is no significant difference between the two groups (IBs and TBs). The adopted significance level for all tests done is equal to 5% (0.05).

## 4 Results and Findings

### 4.1 Loan Loss Reserve to Gross Loan (LLR/GL)

All the test statistics are significant at 0.1 significance level (for other variables *Wilks's Lambda* will be the only statistical test to be used). The null hypothesis is rejected. That's indicating a significant difference between IBs and TBs during the period of the study (2007-09).

Table 3: Multivariate Tests LLG/GL<sup>5</sup>

		Value	F	Sig.
Type	Pillai's Trace	0.081	2.503	0.065
	Wilks' Lambda	0.919	2.503	0.065
	Hotelling's Trace	0.088	2.503	0.065
	Roy's Largest Root	0.088	2.503	0.065

Table 4: LLG/GL Univariate ANOVA (tests of between- Subjects Effects)

DV	F	Sig.
Z(LLR/GL)2007	0.68	0.410
Z(LLR/GL)2008	7.13	0.009
Z(LLR/GL)2009	6.00	0.016

The difference in LLR/GL between IBs and TBs is not significant in 2007 and the null hypothesis will not be rejected for 2007. However, the difference is significant in 2008 and 2009 so the null Hypothesis will be rejected for 2008 and 2009.

Table 5: LLG/GL Pairwise comparison

D V	TBs(I)	IBs(J)	(I-J)	Std. Error	Sig
Z(LLR/GL)2007	0	1	-0.18	0.21	0.41
Z(LLR/GL)2008	0	1	-0.55	0.21	0.01
Z(LLR/GL)2009	0	1	-0.51	0.21	0.02

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<sup>5</sup> Tables 3 to 14 are the SPSS output and were calculated by the author.

Based on the pairwise analysis the null hypothesis will be rejected for 2007 as in the previous test. However, the IBs maintain a higher reserve during 2008 and 2009.

## 4.2 Return on Average Assets (ROAA)

Table 6: Multivariate Tests ROAA

		Value	F	Sig.
Type	Wilks' Lambda	0.911	2.981	0.035

The ROAA is significant for (2007-09), thus the null hypothesis will be rejected for 2007-09.

Table 7: ROAA Univariate ANOVA (tests of between- Subjects Effects)

Dependent Variable	F	Sig.
Z(ROAA)2007	4.79	0.031
Z(ROAA)2008	0.05	0.827
Z(ROAA)2009	6.14	0.015

The corrected model shows that the difference was significant in 2007 and 2009 where the null hypothesis will be rejected. However in 2008 (the Crisis year) the difference was not significant. Thus, the null Hypothesis will not be rejected for 2008. This result shows that the effect of the crisis was the same on both sectors.

The difference between the TBs and IBs was not significant in 2008. Although it is significant in 2007 and 2009 but IBs was higher in 2007 while TBs was higher in 2009. This supports the findings of El-khamisy (2010) and Hassan and Dridi (2010). This highlights the effect of the crisis on the real economy

where the IBs usually operate. On the other hand the high reserves in IBs may have their own effect of the ROAA.

Table 8: ROAA Pairwise comparison

D V	TBs(I)	IBs(J)	(I-J)	Std. Error	Sig
Z(ROAA)2007	0	1	-0.44	0.20	0.03
Z(ROAA)2008	0	1	-0.05	0.21	0.83
Z(ROAA)2009	0	1	0.50	0.20	0.01

### 4.3 Return on Average Equity (ROAE)

Table 9: Multivariate Tests ROAE

		Value	F	Sig.
Type	Wilks' Lambda	0.83	6.20	0.001

The ROAE is significantly difference in the period of study, the null hypothesis will be rejected for all the three years 2007-09.

Table 10: ROAE Univariate ANOVA (tests of between- Subjects Effects)

Dependent Variable	F	Sig.
Z(ROAE)2007	6.46	0.01
Z(ROAE)2008	0.51	0.48
Z(ROAE)2009	11.03	0.00

For the second time the corrected model showed significant difference in 2007 and

2009 where the null hypothesis rejected. Nevertheless, for 2008 (the Crisis year) the difference was not significant. This result shows that the effect of the crisis was the same on both sectors and it coincides with the ROAA result.

The difference between the TBs and IBs was not significant in 2008. It is significant in 2007 and 2009. The results showed that ROAE of TBs was higher in 2007 and 2009. This finding supports the same results of ROAA.

Table 11: ROAE Pairwise comparison

D V	TBs(I)	IBs(J)	(I-J)	Std. Error	Sig
Z(ROAE)2007	0	1	0.507329437	0.199581887	0.013
Z(ROAE)2008	0	1	0.147128763	0.205834225	0.477
Z(ROAE)2009	0	1	0.648054309	0.195152855	0.001

#### 4.4 Net Loan to Total Assets (NL/TA)

Table 12: Multivariate Tests NL/TA

		Value	F	Sig.
Type	Wilks's Lambda	0.86	4.93	0.003

The NL/Ta was significant in the period of study 2007-09, hence the null hypothesis will be rejected.

Table 13: NL/TA Univariate ANOVA (tests of between- Subjects Effects)

DV	F	Sig.
Z(NL/TA)2007	7.57	0.007
Z(NL/TA)2008	13.25	0.000
Z(NL/TA)2009	14.20	0.000

NL/TA is significant for all years, thus the null hypothesis will be rejected. However, the result is expected as both sectors' interpretation for loans and risk associated is different. Rashwan (2009) indicated that IBs face more barriers than TBs as they are allowed only to invest in Sharia'a complied investment.

Table 14: NL/TA Pairwise comparison

D V	TBs(I)	IBs(J)	(I-J)	Std. Error	Sig
Z(NL/TA)2007	0	1	0.55	0.20	0.01
Z(NL/TA)2008	0	1	0.70	0.19	0.00
Z(NL/TA)2009	0	1	0.72	0.19	0.00

NL/TA is significant for all the period of study 2007-09, thus the null hypothesis will be rejected. NL/TA of TBs is higher than IBs even in 2008 the year of the crisis. This may be due to the different lending policies between the two sectors, as the IBs should be involved in real investments while TBs mechanism is based on lending.

## 5 Conclusion

The 2008 crisis hit both banking sectors Traditional and Islamic ones. The Islamic banks outperformed their counterparts in 2007 while the traditional banks performed better in 2009 when the crisis effect start reach the real economy which in turn is the only way of investment for Islamic banks. The finding of this study is consonant with Khamisy et al. (2010), Hassan and Dridi (2010) and Askari et al. (2010). One other reason for the decline in return is the high reserve by the IBs compared to TBs. Although the given sample is limited to the publicly traded banks, the data showed that there is an average increase in assets in the Islamic sector than in the traditional during the period of study 2007-2009. This reflects

more confident in the Islamic mechanism which is expected in the Middle East region as the majority of the population is Muslims. It's worth mentioning that the prohibition of dealing in debts and high risky financial instrument gave the Islamic products more sound in the Western societies, as the effect of the crisis was limited only to decrease on returns and not to huge losses or bankruptcy, which led to an increase in the demand for the Islamic products.

For future investigations, as the Islamic banks growth is expected to be significant in the future, a more financial analysis is needed for the financial institutions that comply with Islamic Sharia'a. Also, new tools are needed as the financial environment is rapidly changing because of technology and globalization. One major shortcoming of the Islamic finance is the absence of standard rules among institutions. It is fair to say that a remarkable improvement is on process especially in the rules standardization, initiated and led by new bodies as the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) and the International Islamic Fiqh Academy. However, more work is still needed. Last but not least, the availability of the qualified scholars and staff is critical towards the growth and stability of this sector.

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