AMERICAN UNIVERSITY OF BEIRUT

THE GLOBAL FINANCIAL CRISIS: RESPONSE OF FOURTEEN ISLAMIC BANKS

by
FARAH NABIL AL NAHLAWI

A project
submitted in partial fulfillment of the requirements
for the degree of Master of Arts in Financial Economics
to the Department of Economics
of the Faculty of Arts and Sciences
at the American University of Beirut

Beirut, Lebanon
April 2014

AMERICAN UNIVERSITY OF BEIRUT

THE GLOBAL FINANCIAL CRISIS: RESPONSE OF FOURTEEN ISLAMIC BANKS

by

FARAH NABIL AL NAHLAWI

Approved by:

Dr. Nisrine Salti, Assistant Professor and Chairperson — First Reader
Economics

Dr. Yassar Nasser, Lecturer — Second Reader
Economics

Date of project presentation: April 29, 2014

AMERICAN UNIVERSITY OF BEIRUT

THESIS, DISSERTATION, PROJECT RELEASE FORM

Student Name: Al Nahlawi Farah Nabil

○ Master's Thesis ● Master's Project ○ Doctoral Dissertation

■ I authorize the American University of Beirut to: (a) reproduce hard or electronic copies of my thesis, dissertation, or project; (b) include such copies in the archives and digital repositories of the University; and (c) make freely available such copies to third parties for research or educational purposes.

☐ I authorize the American University of Beirut, **three years after the date of submitting my thesis, dissertation, or project,** to: (a) reproduce hard or electronic copies of it; (b) include such copies in the archives and digital repositories of the University; and (c) make freely available such copies to third parties for research or educational purposes.

Farah 12-05-2014

Signature Date

ACKNOWLEDGMENTS

My sincere thanks go to my academic advisor and first reader Dr. Nisrine Salti for the ultimate support and motivation throughout the course of study and research. Her patience, enthusiasm, and great knowledge guided me immensely throughout the phases of this project.

I would like to express my gratitude to Dr. Yassar Nasser, my second reader, for his regular follow up and support in addition to the valuable contribution he made to my banking knowledge.

The sincerest and deepest forms of recognition and gratitude go to my mom, Mrs. Imane Massalkhi for her everlasting patience, care, support, and motivation. Without her presence, understanding, and the positive atmosphere she creates, no accomplishment would have been possible. To her I dedicate this project and I owe every past, present, and future success.

AN ABSTRACT OF THE PROJECT OF

Farah Nabil Al Nahlawi for Master of Art
Major: Financial Economics

Title: The Global Financial Crisis: Response of Fourteen Islamic Banks

Islamic banking is one type of banking system that complies with Islamic regulations and abides by the principles of Sharia'. This sector has witnessed growth over the past few decades and had its own individual response to the Global Financial Crisis that hit the world in 2008.

The aim of this project is to investigate the response of fourteen Islamic banks to the crisis. The choice of banks wasn't restricted to the Arab world, it extended to Malaysia and the United Kingdom in order to capture a more general picture.

The project is divided into two parts. The theoretical part introduces the basic principles of Islamic banking, its history, and its financing tools and securities. It also covers Islamic corporate governance and risk management. This part also presents an overview of the Global Financial Crisis as well describing a number of its causes and consequences.

The second part is empirical and includes two approaches are adopted. Following the collection of financial data of the fourteen Islamic banks under study, a weighted average is calculated for each of the profitability, liquidity, credit quality, and capital adequacy ratios based on the relative size of each bank.

The variation in the trend of the average profitability ratios indicated that banks as a group responded negatively to the crisis, however, tended to catch up in terms of their Net Profit Margin and Return on Equity. Their average liquidity ratios revealed that these banks aimed to avoid liquidity risk, while their credit quality ratios revealed a deterioration in their portfolio over the years of the crisis. Capital adequacy ratio showed a decreasing trend as well.

The second approach focused on the regression of a number of these ratios on a group of macroeconomic and financial indicators. Adopting the fixed effects method, the macroeconomic indicators had no effect on any of the ratio except the Capital adequacy, whereby the financial indicators did influence a number of ratios as discussed in the project.

Finally, we discuss the reasons underlying the difference between the results of the ratio analysis and the crisis, and develop the implications these responses can have.

CONTENTS

ILLUSTRATIONS

Charts Page

TABLES

CHAPTER I

INTRODUCTION

The financial crisis that hit the world in 2008 had a major impact on various sectors of the economy and left the banking sector under great stress. Islamic banking though young responded to this crisis on various levels as well.

The literature on Islamic banking reveals that Islamic banks have shown good revenue generating capabilities (Malkoun, 2012). A number of studies discuss the impact of the financial crisis on the industry in more than one area of the world (IMF, 2010).

Using an approach different from the ones used in the literature, this project focuses on the assumed positive performance the Islamic banks had during and after the financial crisis. It attempts to ask and assess the validity of the claim that Islamic banks handled the negative pressure of the crisis and managed to maintain a certain level of growth despite the downturns.

Looking at conventional banks in different countries, the negative implications of the financial crisis are undeniable. The banking sector is one of the sectors that suffered to a great extent during and after the crisis.

The importance of looking at a number of Islamic banks in a group of GCC countries, the United Kingdom, and Malaysia in addition to studying the response of a number of their indicators and ratios to the crisis is to test whether these banks truly had good coping techniques.

Positive results will open the door for the engagement in deeper and more developed research on the reasons behind their prosperity during setbacks. This could teach conventional banks good lessons on handling any slippery situations in the future.

Negative results put the resilience back in the frame of question and promote looking at this hypothesis from a different perspective and using different techniques.

The question of resilience will be posed in more than one way. The project starts with a brief history of Islamic banking and its origins in Chapter II. It then moves to set the building blocks for Islamic finance through discussing its principles, reviewing its financing tools and securities, looking at its corporate governance, and scanning the risk management approaches in its financial institutions. Chapter III will present a brief overview of the financial crisis and its implications on several sectors of the economy.

Chapter IV introduces the banks under study, and gives a brief description of the financial ratios used in addition to the methods followed to analyze the results. To look at the response of these banks, a ratio analysis will be conducted regarding the performance of fourteen Islamic banks before, during, and after the financial crisis in Chapter V. The variability study will cover a number of profitability, liquidity, credit risk, and capital adequacy ratios.

Another examination will reveal the relationship between these financial ratios and the macroeconomic indicators of the seven countries considered in the study in Chapter VI.

Finally, the findings will allow us to uncover new lessons regarding Islamic banks and the way they function in the final concluding chapter. The success of Islamic

banks in times of economic downturns may provide some good lessons for conventional banks.

CHAPTER II

BASICS OF ISLAMIC FINANCE

A. Principles of Islamic Finance

A number of principles underlies the activity of Islamic banks in order to make these institutions compliant with the limits set by Islam. The aim of these rules present in Fiqh al Muamalat is intended to ensure a socially responsible economic activity that guarantees everyone's benefit and honors God. Islamic law supports an economy which allows demand and supply to be determined in the market and not by any governmental or external force. Social justice is at the core of the rules and regulations that govern the economic activity balancing the wealth between people in the society (Jamaldeen, 2012).

1.*Prohibition of Interest (Usury)*

The existence of interest in conventional banks was one of the primary reasons Islamic scholars started looking for alternatives to avoid one of the acts that is prohibited.

The most critical, strict, and widespread concept about Islamic finance is the one that forbids any interest-based transactions ("Origins and history of Islamic", 2009). The concept appears in the Holy Qur'an under the term of Riba, which in literal translation means growth, addition, excess, and increase ("Interest (Riba'), 2001). This

concept emphasizes that money shouldn't be used on its own as a tool to generate profits, rather it should be invested in economic activities that keep the production, trading, and employment cycles going. A positive yield should be shared among the members engaged in a certain activity to maintain balance and equality in the society. Riba affects the welfare of everyone living in a society negatively. It pushes investors to care about returns and interest rates more than their aim for well-developed and beneficial projects. The prohibition of Riba is mentioned in more than one verse of the Qura'an, one of which is the 275th verse of Surah al Baqarah "Those who devour usury will not stand except as stands one whom the Satan by his touch has driven to madness. That is because they say, "trade is like usury", but Allah has permitted trade and has forbidden usury". Jamaldeen (2012) explains that the concept of justice lies at the core of prohibiting "Riba". He discusses that the Islamic law forbids Riba due to the injustice it promotes in the society. In transactions involving Riba. The party holding the wealth receives effortless return. However, the person taking the loan bears the burden of all the risk of either the gain or the loss that the economic activity encounters. Moreover, he is responsible to repay the lender both the interest and capital regardless of the results of the economic activity. Hence, in such transactions, the misfortune of the lender is used by the borrower. This redeems them unjust and not acceptable from an Islamic perspective (Jamaldeen, 2012).

Looking at the technical side, Riba can have two forms: Riba al-nasiah and Riba al-fadl. Riba al-Nasiah is a category of interest that follows a sale transaction whereby one of the parties involved in the exchange receives a premium due to the time lapse preceding the delivery of their part of the transaction. This mainly arises in loans whereby an agreement is reached that involves the repayment of principal plus an extra

amount. On the other hand, Riba al-fadl is the type of interest that comes along with the sale of a "Ribawi Item" also described as an interest commodity. The additional payment made comes to compensate the exchange of a similar commodity, however, the exchanged items may not be of the same quality or have balancing quantities ("InvestmentandFinance.com: Riba al-fadl").

2. Banning Uncertainty or Speculation Based Transactions (Gharar)

In a literal translation, "gharar" is defined to be uncertainty and delusion. It is one of the major prohibitions of the Islamic Shariah. Islam bans transactions that are ambiguous and lack the information needed for a well-based decision. The uncertainty can be related to either the essence of a contract (price or type of item exchanged) or its wording (Jamaldeen, 2012).

"Gharar" is a form of informational asymmetry between the two sides of a contract whereby one party has more information than the other.

"Gharar" can leave one or both of the parties in an unjust situation.

3. Prohibition of Gambling

Qimar and Maysir are two concepts that reflect forms of gambling and are strictly banned by Shariah laws due to the extreme uncertainty (Gharar) involved in them, since the payoff of the gamble isn't certainly predictable. Moreover, this goes back to one of the core concepts of Islamic finance that consider justice one of its

priorities as well. Maysir transactions are deemed unjust due to the absence of a Sharia-compliant economic activity to explain wealth acquisition. Injustice is highlighted in Qimar as well whereby one end gains leaving the other at a loss (Jamaldeen, 2012).

By definition, Maysir is the effortless takeover of wealth, usually by chance, while Qimar denotes the modern form of gambling (games of chance). Again, these two concepts are at odds with the Islamic aim of social justice ("The evils of Gambling", 2001).

4.Forbidding investment in certain prohibited economic sectors

Islam restricts investment in certain sectors that come against society's welfare and disturb social responsibility. The prohibited fields are always open to new inclusions with a changing world. However, the realms critically excluded are alcohol, prostitution, pornography, weapons of mass destruction, cloning, in addition to products like pork, tobacco, and illegal drugs. Projects related to these industries are critically prohibited by the laws of Shariah. Participation in any form of funds in companies related to these groups is forbidden as well (Jamaldeen, 2012).

5. Profit and Loss Sharing Principle

Looking at economic activities from an Islamic perspective, the concept of profit and loss sharing is emphasized. The involvement of both entrepreneurs and investors in handling the responsibility of any gain or loss and avoiding the transfer of risk is essential in the Shariah compliant industry.

A number of products highlight this principle. Mudaraba and Musharaka products discussed in the coming section ("Profit and loss sharing", n.d.).

6. Asset- Backing Principle

A number of contracts exist for transactions that involve the exchange of a commodity. Although these contracts may be known in the realm of conventional banking as debt-based, debt doesn't truly underlie them. However, the focus is on the process of asset exchange. These contracts should only involve real assets owned by the selling party and not a third one. Sale of debt in capital markets promotes transactions of a speculative nature which are banned (Jamaldeen, 2012).

Throughout this principle, social justice is well developed since both parties enjoy the reward and bear the risk of the underlying asset. A number of Shariah compliant products that serve investment financing will be discussed in the coming section. These are Murabaha, Ijara, Salam, and Istisna products.

B. History of Islamic Finance

Despite the fact that the concepts of Islamic banking go back to the early Islamic empire, when the "Mudarabah" (also known as Islamic partnership -a basic Islamic finance instrument) was used by the Prophet Mohammad (SAW) in trading operations, Islamic banking started gaining popularity in the 1960s (The Islamic Banker, 2010).

After the death of Prophet Mohammad (SAW), a new financial tool was revealed in the realm of Islamic trade. Known as Sakk (Certificate), the instrument developed to allow Muslim traders to exchange payment obligations through these documents between the 7th and 9th centuries (Jamaldeen, 2012).

During the same period, Diwan al Jahabidhah was developed in large cities of trade. The banking system didn't deal with interest. It was controlled by "Jahbadah" who were chosen by the governors and had a wide range of positions to hold. In addition to providing Caliphs, ministers, and officials with loans, the financial centers played an important role in deposit management, transfer of funds, tax collection, and the preparation of accounting statements (Jamaldeen, 2012).

Mudarabah reached Europe in the 11th century whereby the limited contract was expanded to include a larger number of partners (Jamaldeen, 2012).

In the 13th century, with the breakdown of central governments and the movement away from Islamic principles,, the system was moving into a more secular state, although the tools of Islamic finance were still in use (Jamaldeen, 2012).

Following the first world war in 1920, the state of the Ottoman Empire deteriorated and the Middle East was split giving each of the major colonial powers its share. Along with that, a modern banking system was promoted in Islamic countries as the colonizers required these institutions to fund various economic activities. Hence, European colonialism took over the land and the economy as well ("History of Islamic Banking", n.d.).

The conventional system wasn't welcome by the majority of the Islamic society that started looking for alternatives (Jamaldeen, 2012).

In the period that followed the second world, a number of Islamic countries achieved their independence and promoted the Islamic line of thought that extended to the financial sector ("History of Islamic Banking", n.d.).

Islamic banking was first modeled as an experiment by Ahmad Al Najjar in 1963. The Mit Ghamr Local Savings Bank which survived for around 3 years in Egypt opened the door for the establishment of modern Islamic banks (The Islamic Banker, 2010). Supporting Islamic banks as players in the banking sector, Mit Ghamr was the pioneer in promoting general rules of Islamic finance coherent with the Islamic Shariah. These focus on profit sharing and step away from interest payment. Muslim Pilgrims' Saving Corporation was another form of Shariah compliant institution that developed during the same period in Malaysia ("History of Islamic Banking", n.d.). This facilitated savings to Muslims aiming to travel to Saudi Arabia for "Hajj" one of the pillars of the Islamic religion.

The first official Islamic bank was established in 1974 in Jeddah (Saudi Arabia) under the name of Islamic Development Bank. This was the result of the efforts of the organization of Islamic countries that targeted projected financing in their home countries (Ariff, 2001). The formal purpose of IDB was stated to be the fostering of economic development and social progress of a number of Islamic countries and communities without deviating from the Shariah guidelines (ISDB, 2014). Its member countries expanded to reach 56 with major players like the Kingdom of Saudi Arabia, Libya, Iran, Nigeria, United Arab Emirates, Turkey, and Kuwait (Jamaldeen, 2012).

The opening of Dubai Islamic Bank took place in 1975. It was followed by the Faisal Islamic Bank of Sudan in 1977, and Bahrain Islamic Bank in 1979. (The Islamic

Banker, 2010). Following these establishments, the number of interest-free banks that saw the light exceeded 50 that included the Kuwait Finance House, the Jordan Islamic Bank, and Bank Islam Malaysia Berhad (Jamaldeen, 2012).

In 1985, the Islamic Fiqh Academy paved the way for Islamic banks to gain great importance when a statement was issued to restrict Muslims to Islamic Banks only in the areas where these are present (Jamaldeen, 2012).

Despite the fast spread of the Islamic banking concept, the innovation of products and services was slow in the early years. The focus was more on conventional based products modified to fit with the Islamic regulations.

Shariah compliant banks didn't restrict themselves to Islamic countries. They crossed the borders to a number of areas especially Western Europe and the United States, until they became widespread internationally. Their European importance surfaced in the United Kingdom whereby laws that cover Islamic banking were issued in London (Venardos, 2012).

The importance of Islamic Banking allowed a number of conventional banks to step into the industry through subsidiaries like HSBC Amanah and Citi-Islamic. In 2012, the number of banks in the industry grew at a rate ranging between 10-15%. This isn't by far from the Islamic banks which are spreading worldwide exceeding 300 institutions over a range of more than 50 countries (Venardos, 2012).

Although Islamic Banks were spread in a number of countries, they had private motives. The idea of Profit and Loss sharing became official in the beginning of 1981 in Pakistan. The whole system drifted away from interest payment in the middle of 1985 (State Bank of Pakistan, 2002). Profit and loss conditions applied to all existing deposits

with minimal exceptions. On the other hand, the Iranian system adopted a transitory approach as well. A maximum service charge that ranged between 4 and 8% replaced interest and the concept of guaranteed minimum profit was introduced (Abdul Gafoor, 1995). By 1985, the Iranian banking system was totally interest free.

The Iranian attitude towards Islamic finance allowed it to rank among the top countries with Shariah compliant assets along with Saudi Arabia and Malaysia whereby these assets amounted to nearly $400 Billion with a potential market of $4 Trillion in 2009 according to Standard & Poor's (Al Bashir & Al Amine, 2011). Iran led with a share of around $235.3 Billion. Its banks took over 35.6% of the total assets of the top Islamic banks with Bank Melli Iran ranking first (Mehr News Agency, 2009). Moreover, 7 of the top ten Islamic finance institutions were in Iran (Global Islamic Finance Magazine, 2009). A recent research by KFH shows that Iran took over 42.7% of the total global Islamic assets in 2012 (Tehran Times, 2013).

Finally, Southeast Asia promoted an Islamic banking network through the Islamic Bank Bangladesh Ltd in 1983 (Global Islamic Finance Industry, 2012) and the trend followed to Azerbaijan in 2012 whereby the International Bank of Azerbaijan developed its Islamic banking channels (Abdullayeva, 2012).

C. Overview of Islamic Financing tools and securities

A number of Shariah compliant contracts are at the basis of Islamic banking. Procedures followed by Islamic banks are welcome as long as they abide by the Islamic principles of finance and don't deviate towards "Riba", "Gharar", or any other prohibition.

Contract laws in Islam appear in three major forms. The first is the unilateral promise (Wa'd) whereby only one group is bound to deliver a certain function at a later time. The second form is a bilateral promise also known as Muwaada which is a union of two distinct unilateral promises targeting the same topic. However, this isn't a contract in its official Islamic definition (Al Masri, 2002).

The third is a contract ('aqd) that is fundamentally different from the first two due to its legally binding conditions. According to the Islamic law, the validity of the contract must be satisfied by six factors. These are: the two sides of the contract (the giver and the taker), the offer (ijab), the acceptance (qabul), the subject matter, and the consideration (Baloch, 2012).

1. Partnership Contracts

These contracts lie at the core of Islamic finance. Having a bilateral nature, these contracts pave the way for the multiple sides of the contract to share both the reward and the risk. The most popular and widespread contracts of partnership are the Mudarabah and Musharakah.

a. Mudarabah

It's a method of financing whereby money is provided from one party called the investor (Rab al Mal) to the other party who handles the work and management and is known as the working partner (Mudarib) in order to perform a certain investment or activity (IIBI, n.d.). The Halal (accepted by Islamic law) profits are divided by the two

sides of the partnership according to ratios agreed upon by the parties in advance. If there is no prior agreement, profits are shared equally.

From a banking perspective, Mudarabah contracts are frequently used in this sector. One special case is that of investment accounts whereby the capital (deposit) is provided by the customer, thus, he is the investor, and the bank is the party managing the investment.

The types of Mudarabah are:

i. Restricted Mudarabah (Muqayyadah)

In this type of Mudarabah, the investor can choose the field he wants the working partner to invest in.

ii. Unrestricted Mudarabah (Mutlaqa)

The working partner is given the freedom to invest in the realm he sees profitable and suitable as long as he doesn't involve another working partner or include personal investments ("Concepts of Islamic Economics", 2006).

b. Musharakah (Joint Venture)

In this type of contract, the partners get involved in presenting all the sources from capital to skills and labor not necessarily in equal ratios. The concept of profit and

loss sharing applies here as well. Applying Musharakah from the perspective of Islamic banking, these institutions aim to develop projects, finance trade, and raise capital ("Deloitte.com: Understanding Musharakah").

The types of Musharakah are:

i. Consecutive Musharakah

Each of the participating parties can hold on to his share until the venture is over. The withdrawal or transfer of shares is possible for one of the partners unless the contract states otherwise.

ii. Diminishing (Declining Balance) Musharakah

A step by step sale of one of the partner's shares of equity. The gradual decline in one of the partner's balance is an increase in the balance of another. In this type of Musharakah, the profit and loss proportions should be looked at every time a transfer of a number of shares happens.

In general, the consecutive Musharakah is applied by Islamic banks in the process of investing in the varied types of business projects and economic ventures. In this case, the bank gets profit based on the percentages previously agreed upon by the parties.

Diminishing Musharakah on the other hand is often used to deal with real estate products. It goes through a rent-to-own strategy whereby over time the bank's

ownership over a certain property decreases and the other party's ownership increases as the payments are made ("Deloitte.com: Understanding Musharakah").

2. Exchange Contracts (Asset Based Financing Instruments)

a. Murabaha

This type of contract allows the sale of a product for its cost in addition to profit. This is known by both sides of exchange. In the context of Islamic banks, Murabaha takes place when a commodity is bought by the bank and supplied to the client who lacks the capability of financing the purchase directly. A markup is added to the cost which is agreed on by both the client and the bank("Dib.ae: Murabaha"). Moreover, payments could be done as deferred installments or lump sum upon the delivery of the product.

Basically, Murabaha denotes a sale transaction. However, just like any other, it has to satisfy a certain criteria to ensure its compliance with Shariah rules. The first condition doesn't allow the institution to charge the customer for late payments. However, certain extra fees could be considered in cases of damage due to default. It also allows the client to become more responsible in settling the payments. Yet, this income is distributed to charity and not taken for the benefit of the institution. The other rule imposes that only purchases can be done through this contract, however, working capital couldn't be financed (Jamaldeen, 2012).

The types of Murabaha are:

i. Murabaha to the Purchase Orderer

The customer asks the bank to buy a certain product on his behalf and agrees to purchase it from the bank ("Albaraka.com:Murabaha").

ii. Commodity Murabaha

This is one of the tools used in interbank transactions between Islamic banks. It's used to back up the bank's short term liquidity requirements. However, gold, silver, salt, dates, wheat, barley, and any commodity serving as a medium of exchange couldn't be used (Jamaldeen, 2012).

b. Reverse Murabaha (Tawarruq)

This financial instrument involves three parties. The commodity is purchased by the first on the basis of deferred payments. However, it's sold to a third party through spot payment.

It's called Reverse Murabaha because a Murabaha contract is done to ensure the sale of the item primarily, and then the whole amount is settled once the item is sold to the third party, thus, the Murabaha contract is reversed.

However, the compliance of this instrument with Shariah is controversial (Jamaldeen, 2012).

c. Leasing or Renting (Ijara)

This contract allows the temporary delivery of a service or good for a certain return. It works by means of rental or lease. Using this tool, one party takes the right of utilizing the item also known as "Usufruct" for a specified time frame whereby the ownership of the assets doesn't change (Abu Ghuddah, 2007).

Although Ijara and conventional lending are similar, certain conditions must be kept in order to ensure its compliance with Shariah. The first condition implies that the products must be owned by the same party for the whole rental period. Moreover, compound interest cannot be charged regardless of any default or delay by the lessee. The third condition involves stating the specific use of the rented asset.

The types of Ijara are:

i. Lease with Ownership (Ijara wa iqtina-Ijara muntahiya bitamleek)

The party renting the item gets its ownership by the end of the rental period. Although this promise isn't necessarily (deliberately) mentioned in the contract, it can be done through a unilateral verbal promise from the bank to shift the ownership and another promise from the lessee to buy the item. The price is negotiated by the two parties or is market determined (Jamaldeen, 2012).

ii. Operating Lease (Operating Ijara)

iii. Forward Lease (Ijara Mawsoofa bil Thimma)

It's one type of lease or rental that is redeemed at a specified time in the future. Applying this tool, a project is usually bought either after completion or in installments.

d. Financing construction projects or purchase orders (Istisna)

This instrument entices an agreement done by a manufacturer to accomplish(execute) a project in the construction field for a specific price and characteristics. Withdrawal of the buyer is righteous if any of the contract conditions isn't met. Istisna doesn't put strict payment conditions. Payments are scheduled based on the parties' agreement. Trade financing and construction projects are the main focus of these contracts (Jamaldeen, 2012). In order to strictly comply with Islamic laws and minimize "Gharar" (uncertainty), the contract elaborately discusses the specifications of the product that will be delivered later (Abu Ghaddah, 2007).

The process begins with a contract signed between the banks and a client who requires an asset with certain specifications. The bank then ensures the manufacture of the asset via its agents.

e. Deferred Payment Sale (Bay’ al Muajil)

This is one of the tools that is often used to resolve short-term liquidity problems.

This type of sale entails a simple agreement between the buyer and the seller to purchase the product for a deferred payment. The payment could either be a lump sum or a number of installments over time.

Certain restrictions distinguish this contract. The first is that the agreement on trade price should occur when the contract is originally signed. The second is that penalty cannot be charged for any default or delayed payment (Ipbusa, 2009).

Islamic banks usually combine deferred payment sale with Murabaha.

f. Purchase with Deferred Delivery (Salam)

In "Salam" contracts, economic activities or products with delayed delivery dates are fully financed in advance. The buyer fully funds the project or product on the spot and gets a supply promise from the seller.

Salam creates a controversy in terms of the conditions Islam sets on sale contracts. As the product must physically exist in order for the contract to be Shari'a compliant, strict rules make Salam possible. These are the legal possession of the product by the seller. Delivery conditions (Time, Date, Quality, & Quantity) are highlighted in the contract (Jamaldeen, 2012).

3. Islamic Bonds (Sukuk)

Because conventional bonds are interest-bearing, they don't comply with the laws of Islamic Shari'a, thus, an equivalent for this tool commonly known as Sukuk was developed.

A "Sakk"; the singular form of Sukuk a certificate (Written Document). Sukuk have been present historically in the Islamic world. However, historical sukuk fall short in the comparison of the instrument present in the modern market ("Investopedia.com:Sukuk").

According to the Islamic Financial Services Board (IFSB), Sukuk are defined to be: "Certificates with each sakk representing a proportional undivided ownership right in tangible assets, or a pool of predominantly tangible assets, or a business venture. These assets may be in a specific project or investment activity in accordance with Shari'a rules and principles" (IFSB, 2009; Jamaldeen,2012).

Unlike ownership bonds that represent the ownership of debt, Sukuk convey the ownership of an investor to part of an asset in addition to both the cash flow and the risk associated to it. Sukuk can have different types depending on the underlying product. These are: Sukuk Murabaha (Debt), Sukuk Al Ijara (Asset), Sukuk Al Istisna (Project), Sukuk Al Musharaka (Business), or Sukuk Al Istithmar (Investment) ("Lexicon.ft.com: Definition of Sukuk") .

In recent years, Sukuk have played an important developmental role in the Islamic capital markets. This tool creates a connection between its issuers and a diversified group of investors. Technically, Sukuk yield funds that have can be allocated in a number of industries to fund certain projects.

Modern day sukuk were primarily issued by Malaysia in 1990. Bahrain followed in 2001(Smolo, 2012).

Despite the fact that the Sukuk market is a young one, the growth in its issuance ranges between 10 and 15%. With $14.9 Billion issuance value in 2008, the market has shown a significant increase to $23.3 Billion in 2009("Isdb.org:What is Sukuk"). The valuation of outstanding Sukuk by 2011 was estimated at $182 Billion and a 30% yearly growth rate (Jamaldeen, 2012).

D. Islamic Corporate Governance

1.General Definition of Corporate Governance

In general, corporate governance denotes the accountability held by a company's senior management towards both internal and external shareholders. These include shareholders, customers, employees, government regulators, suppliers, and other financial institutions. This concept represents a number of rules and regulations followed by a corporation's management in order to ensure accountability and transparency. Thus, it includes setting the company's objectives and ensuring that all the tools needed to achieve the objectives and monitor the performance are available (Thomson, 2009).

Corporate governance is rooted in the fact that the company's shareholders save a number of rights. These rights vary from a group of stakeholders to the other. They can make information about the company's transactions, fiscal status, share of corporate profits, or election of the board of directors.

One of the basic components that underlie the prosperity and thrive of the Islamic finance industry and ensure a well based development is good corporate governance. Shari'a rules need to be harmonized with the regulations of conventional banking in order for these institutions to ensure compliance with both players of the game.

Islamic corporate governance is shaped in a way that caters for specific needs. A number of features distinguish it from conventional corporate governance. They are Shari'a-compliant. Additional features take into account the relationship between the institution and the investment account holders and the depositors as well. Investment in Islamic banks relies greatly on sharing risk and return. The partnership between the firm and the investor ensures equity participation. Unlike investors in conventional banks which provide a predetermined interest rate, investors in the Islamic industry should have extensive information about the economic activities the institution ventures in. Similarly, the depositors at Islamic banks have greater interest in the bank's ventures and financial status than their conventional counterparts, especially if they have investment intentions and aren't only concerned with the bank for safe guarding their money (Ahmed & Chapra, 2002).

Another important issue that needs to be shaped to serve the Islamic and conventional governance needs is the rules of financial reporting. A number of differences exist between the financial reports of Islamic banks and their conventional counterparts. The balance sheet and income statement of Islamic banks include a number of transactions that don't go under those of conventional banks. Islamic financial institutions issue four additional reports that are confined to their industry (Jamaldeen, 2012).

Reserves form one critical differentiating factor between Islamic and conventional governance. Investment risk reserve and profit equalization reserve are two types of reserves that are unique to the Islamic industry. These reserves aim to maintain consistent returns for investors and protect their principal (Jamaldeen, 2012).

2.Shari'a Governance

In addition to conventional corporate governance, Islamic financial institutions need to ensure compliance with Islamic law through the development of Shari'a boards. These boards are considered a primary component in this industry. They keep an eye on the adherence of these institutions to the principles of Shari'a (Jamaldeen, 2012).

3.Shari'a Board

From an organizational perspective, the Sharia' board plays an important role that places it near the top of the Islamic financial industry. In most of the cases, this board reports to the Board of Directors or executive management. The number of Shari'a board members usually ranges between three and six.

Shari'a scholars on the board should have a well developed knowledge of Islamic business law, and are aware of the detailed rules of conventional finance, economics, and accounting. The board should have scholars specialized in Fiqh al Mu'amalat. This package lies at the basis of leading the institution into market success.

The Shari'a board is recruited and paid for by the Board of Directors. It usually has the following structure: a chairman represented by the scholar who heads the group, a general secretariat who acts as a link between the board and the senior management, and other members who accomplish regular duties assigned to the board (Jamaldeen, 2012).

4.Roles of Shari'a Board

A Shari'a board is held responsible for a number of tasks. First, the board plays a supervisory role in order to guarantee that the institution's activities are Shari'a compliant. After performing their role as an auditing team, the board promotes innovative ways to improve the level of compliance. Moreover, the board works on reviewing potential products. Providing innovative products that are as well Shari'a compliant allows Islamic banks to compete with conventional ones ("The Role of the Shariah Advisory Board", n.d.).

The board can have a number of other tasks that include: the archiving of certain documents related to meetings, resolutions, and studies, shifting the income coming from noncompliant activities to charity funds, ensuring the firm's payment of Zakat (money donated by charity and one of the pillars of Islam) and informing customers about it, supervising the Shari'a related angle of the institution's annual report, and communicating Islamic law matters with other organizations.

5. Shari'a Corporate Governance in the Real World

The following looks at Sharia' boards in some of the countries considered in our study.

a. Malaysia

The Central Bank of Malaysia (Bank Negara Malaysia) initiated the Shari'a advisory council in 1997. The council which exhibits Shari'a governance is one of the highest authorities. It determines the Islamic law that governs Islamic banks and other financial institutions.

The council acts as a second layer of supervision that comes after the direct (primary) supervision of each institutions' unique Shari'a board. Moreover, it plays an important role in the validation of innovative products of the Islamic financial markets. The Shari'ah Advisory Council delivered greater power from the Act issued by the Central Bank of Malaysia in 2009. It paved the way for the council to gain a sole importance over all matters related to Shari'a in the Malaysian Islamic finance industry (Jamaldeen, 2012).

b. Bahrain

The National Shari'a Board was promoted by Bahrain's Central Bank to monitor its own Sharia' compliance. Other financial institutions should have their own Shari'a boards to reflect on their compliance.

c. Kuwait

Shari'a governance is dealt with through the board of each institution independently. In case of conflict between Shari'a board and Board of Directors, parties refer to the Fatwa Board of the Ministry of Awqaf and Islamic Affairs.

E. Risk Management in the Islamic Financial Institutions

One of the significant traits of Islamic finance is that risk and reward are shared between the client and the institution. Unlike the conventional industry which bears the burden of all the risk, Islamic firms face a lower risk. However, Islamic financial institutions face in addition to the common liquidity, market, operation, credit, and reputation risk faced by conventional firms additional ones that are unique to the institution like Shari'a noncompliance risk, equity investment risk, rate of return risk, and displaced commercial risk (Al Baraka, 2014; Jamaldeen, 2012).

The various risks faced by Islamic banks have numerous roots. Starting with credit risk, this could arise in Murabaha contracts when the party defaults in settling the full payment during the right time. This is interlinked with non-performance which can go back to moral hazard in terms of willful default, internal financial reasons, or external systematic causes. In Mudarabah and Musharakah, this is highlighted when the entrepreneur doesn't pay the bank's share. This comes along due to the asymmetric information when banks lack the complete information about the profits of a company (Hassan &Lewis, 2007).

Regarding market risk, this risk is branched into systematic that is due to macroeconomic factors and unsystematic depending on the nature of the asset (Hassan & Lewis, 2007).

Liquidity risk is common to both conventional and Islamic banks. It arises from the difficulty in obtaining cash either through funding or through the sale of an asset. This risk is critical in Islamic banks due to several restrictions like the inability of quick fund raising due to the slow rate of innovation in these banks financial products, the absence of an Islamic interbank market, and the inability to refer to central banks as lenders of last resort due to the interest based nature of these transactions (Hassan & Lewis, 2007).

Operational risk, on the other hand, is closely related to the young nature of Islamic banks whereby these banks may fall short of qualified professionals to perform the Islamic based financial operations.

Legal risk is one of the risk that has significant importance in Islamic banking since most countries' laws do not incorporate the unique characteristics of these financial products. One of the underlying problems is that standardized contracts do not exist making it hard to protect these institutions against risk. Moreover, Islamic courts are not widespread to enforce Sharia' compliant contracts (Hassan & Kayed, 2009).

Regarding the risks unique to Islamic banks, Sharia' non compliance surfaces when the bank fails to comply with the set principles and rules of Sharia'. This could lead to a drop in the contract's validity, non-halal income, and will affect the capital adequacy ratio. Moreover, this will mess the bank's reputation (Thjis, n.d.).

The rate of return risk reflects how returns are affected when the rate of return is modified surprisingly. This could pave the way for a displaced commercial risk that arises due to the market pressure and the expectations of fund providers to receive higher return. In such cases, Islamic banks bear the burden of paying returns higher than those earned by the assets (Thjis, n.d.).

Equity investment risk is one of the risks that are highly present with Mudarabah and Musharakah contracts whereby the value of an equity position risks a decline (Thjis, n.d.).

Risk is a major concern for the Islamic financial institutions' stakeholders especially with the widespread concept of profit and loss sharing. The young age of the Islamic financial system in addition to the restrictions imposed on it implied that the industry has limited options to deal with the various types of risks.

This industry views that the common instruments used by conventional banks to transfer or avoid risk like shorting sales, futures, options, and swaps are all gharar based and must be forbidden.

Thus, there are no set rules for risk management, however, any solution that doesn't contradict Islamic law is welcome (Jamaldeen, 2012).

Risk sharing, however, allows the lender and the borrower to bear a portion of the risk.

1.Types of Risks and their Management

Comparable to other financial institutions, Islamic banks deal with moral hazard and informational asymmetry. Moral hazard comes along with the leniency certain debtors benefit from. Informational asymmetry is clear through Mudaraba and Musharaka contracts based on profit sharing. In these realms, the bank could amplify the cost and provide the depositors with minimal returns. This type of problems could be dealt with through auditing (Hasan & Kayed, 2009).

One of the risks unique to Islamic finance is ownership risk. This risk is one of the components that explains the markup banks take in Murabaha contracts. This arises when the customer stops the delivery due to faults in the good, or sues the bank rather than the supplier if any defect in the good is found post delivery (Wilson, 2008).

Another risk common for all banks in the industry is the opportunity cost of liquidity risk, which is usually more significant for Islamic banks that are forbidden from holding any interest bearing tool (Hasan & Kayed, 2009).

The principles of Sharia' Islamic banks comply with did play an important role in managing and controlling the risks that lied at the basis of the Global Financial Crisis.

Primarily, Islamic finance principles forbid selling a debt against another. Aiming to ensure transparency and justice of transactions, the ends of the contract should be fully informed in order to assess risk appropriately. Hence, the Global Financial Crisis that was due to subprime mortgages, complex risk shifting financial instruments, speculation, insufficient risk assessment, and excessive lending would be theoretically impossible in such a case.

On the other hand, Sharia' compliant finance relies greatly on equity. However, in terms of lending, they focus more on asset backed transactions. Hence, mortgage loans the Islamic way are backed by a structure of solid assets that protects the Islamic banks against any prospective defaults. In this case, the health of the banking system won't be threatened by the size of the loan defaults, contrary to what happened during the crisis whereby money trade wasn't asset backed.

One of the factors that could control risk as well in the Islamic finance model is moderation which is preached in Islam. This could have restricted Muslims from rushing to take loans at a time where they couldn't repay them just because they were available (Hasan & Kayed, 2009).

Aiming to step away from risk as well and following Islam's interest in maintaining a close relationship between Islamic financial institutions and their customers, transparency in business transactions is ensured. This allows financiers to issue loans only to customers who are redeemed worthy, are in serious need, or have a well developed business project. This is accompanied by full disclosure which minimizes "Gharar" and helps these banks shift away from the causes underlying the financial crisis (Hasan & Kayed, 2009).

One additional factor that pushed the financial crisis was the unavailability of a regulatory framework that monitors and guarantees investors' interests. Shareholders must be aware of the risk and financial institutions must ensure transparency and disclosure standards.

Looking at risk management in the context of a financial crisis in general, Hasan & Kayed (2009) views that a number of steps should be taken to minimize risks

in financial crises. Primarily, contracts should be documented clearly in order to highlight the rights and obligations of each party and avoid any disputes that might arise. The second measure focuses on market disruption. This necessitates that Islamic financial institutions pay close attention to their contracts to make sure that provisions are included. The presence of these provisions simplifies the renegotiation of commercial relationships with their customers in order to deal with unexpected disruptions in the market. These include but aren't restricted to political turmoils, natural disruptions, rise in inflation and interest rates and credit crunch. This comes along with measures adopted by conventional banks. One extra measure deals with debt and equity. This is highlighted during times of economic booms and upheavals. When the economy is doing well Islamic institutions incur debt. This is highlighted during times of economic booms and upheavals. When the economy is doing well, Islamic institutions incur debt. This provides them with backup to amplify turnover and leverage their profits. However, during times of economic turmoil, extremely bad and severe performance is reported by those highly leveraged firms. This will render them technically insolvent because of their inability to perform maturity matching (matching asset-related cash flows with liability related cash-flows) and adopting aggressive financing strategies. Hence, equity financing will spare the institution the financial risk that comes with leverage and allow them to attain high profits. Moreover, the equity based Mudaraba and Musharaka are more flexible than the debt based Murabaha. Another measure takes into consideration the law. The regulations followed in Islamic financial institutions should scope Islamic Shari'a and consider non Islamic rules. Focusing on Shari'a only to promote the law allows uncertainty to arise, due to the multiple interpretations it could have. On the other hand, rules should be set in order to

limit any speculation in stock and currency trading. This could minimize the effect of market risk on Islamic banks which should be cautious while dealing with financial innovations (Hasan & Kayed, 2009).

According to Hasan & Kayed (2009), "A well-designed regulatory-prudential-supervisory institutional framework should be comprehensive enough to cover all transactions and all financial instruments and innovations. It would also cover all financial institutions operating within the system" (Hasan&Kayed, 2009).

CHAPTER III

GENERAL OVERVIEW OF THE FINANCIAL CRISIS & LITERATURE REVIEW

The Global Financial Crisis that hit the world in 2008 had severe implications on numerous sectors of the economy. Its effects escaped the borders of the United States to spread over a number of countries. Elmeskov (2009) points out that the negative energy of the financial crisis did influence the economies of both developed and emerging countries. His study revealed that the growth slowed down by nearly an equal magnitude in the two areas. This was coupled with a drop in international trade and tight restrictions on credit (Elmeskov, 2009). Moreover, many researchers declare that this crisis is the worst since the Great Depression in 1929 (Hilsenrath, Ng, & Paletta, 2008).

In addition to the risk of the financial institutions falling apart, the banks' need for government bailouts, and the extended periods of stock market downturns internationally, real estate markets collapsed and unemployment overshot. The recession spread over the key businesses and pushed the European sovereign debt crisis forward (The Economist, 2013).

Despite the fact that a complex combination of reasons was behind the crisis, the burst of the US real estate bubble was a major factor. This came along when banks started offering more loans to potential owners allowing the prices of houses to increase because of increased demand. The real estate collapse resulted in the diminution of the value of the US real estate based securities (The Economist, 2013).

The causes of the crisis were numerous. Thomas, Hennessey, and Holtz-Eaki (2011) discuss the most common explanations of the crisis.

One attributes the crisis to the interference of the government in the housing market inflating the housing bubble. Another approach attributes it to the attitude of bankers who took advantage of mortgage investors and homeowners and benefited from high levels of personal profit. The crisis is also attributed to a combination of the forces of the Global Economy and the failing approaches of US policy and supervision created a good core for the crisis (Thomas, Hennessey, Holtz-Easki, 2011).

Thus, the general view summed up a number of causes that are: subprime lending, growth of the real estate bubble, loose credit conditions, deregulation, predatory lending, misleading pricing of risk, and the increase in the prices of commodities.

However, a group of the members of the Financial Inquiry Commission that was convened to investigate the roots of the financial crisis believe that none of the reasons provides a full package explanation for the tangible determinants. They point out that the union of ten factors provides a good foundation for explaining the crisis. The first two factors considered the credit bubble in Europe and the US in addition to the uninterrupted US housing bubble. The third factor focuses on the increase in nontraditional mortgages due to an increase in liquidity and housing prices coupled with inadequate regulation in the primary mortgage market. These mortgages were deceptive, confusing, and extended beyond the people's ability to pay (Thomas, Hennessey, Holtz-Easki, 2011).

The fourth factor concentrated on bad credit ratings and securitization. According to The Economist (2013), the risky mortgages that were held by borrowers who had trouble repaying them were transformed by financial engineers at big banks to assumingly low risk securities through pooling a number of them together. Securities like collateralized debt obligations (CDOs) were backed up by these pooled mortgages. The whole process is known as "Securitization". These collateralized debt obligations were divided into categories depending on the level of exposure to default. Bad credit ratings were highlighted when safer categories of these CDOs were bought by investors due to the trust they had in triple-A rated credit assigned by agencies like Moody's and Standard & Poor's. The ratings were misleading especially that these agencies are held and paid for by the big banks that promoted the CDOs (The Economist, 2013).

Two additional factors focus on the attitude of big and medium sized financial institutions. These collected large amounts of housing risk with high correlation, and this risk was ballooned due to the minimal capital held with respect to it. Such exposures were supposed to be funded by short term debt, however, the latter wasn't always available (Thomas, Hennessey, Holtz-Easki, 2011).

When the above risks hit highly leveraged and short funded financial institutions that are founded on a class of assets that was now collapsing, a series of firm failures took place. This highlighted the seventh agent "Risk of Contagion", whereby the collapse of one firm led to losses in another (Thomas, Hennessey, Holtz-Easki, 2011).

On the other hand, firms that weren't related at any level made similar wrong bets regarding housing mortgages at nearly the same time. This caused the effects of a

common shock that hit the real estate industry to be an additional underlying reason behind the economics collapse (Thomas, Hennessey, Holtz-Easki, 2011).

Financial disturbance and panic due to the domino failures and restructuring of ten firms served as an extra factor.

Finally, the real economy was truly hit after the spread of financial shocks and panic. This came after the drop in people's trust and confidence in the work of the financial system especially after the deterioration in the status of a number of financial firms.

These factors emphasize the global nature of the crisis.

A. Phases of the Global Financial Crisis

The crisis went through a number of phases. According to Elliot (2011), the first phase's trigger was pulled on the 9th of August 2007 as the banking sector was shocked with BNP Paribas' measures. The announcement involved cutting down the work in three of the US mortgage debt hedge funds. At that time, the size of the losses and the exposure of banks were unknown, trust diminished and interbank business was down (Elliot, 2011).

On the 15th of September 2008, Lehman Brothers faced bankruptcy, by that time, it was thought that governments would always take bailout measures towards any bank in trouble. This was the case when the US found a buyer for Bear Sterns and Northern Rock was nationalized by the UK government (Elliot, 2011).

The "too big to fail" concept wavered with the failure of Lehman Brothers. The fear of a domino effect pushed governments of the west to provide their banks with huge amounts of capital to save them from any potential collapse. Although this saved the banks, it couldn't hold the Global Economy before the crash. This was accompanied with the disappearance of business and consumer confidence (Elliot, 2011).

The arrow was directed towards the public sector on the 9th of May 2010. The declaration of the European Union (EU) and the IMF to financially support Greece no longer dealt with banking solvency, but extended to the solvency of governments (Elliot, 2011).

During the recession, budget deficits mushroomed due to the decreased tax revenues and increased welfare expenditures. Austerity measures spread over the Euro zone, the United Kingdom, and the United States which survived a long term expansionary fiscal policy.

However, the end of the dark tunnel doesn't seem to be close. The crossroad seems to hold two options of either an extended period of minimal growth and extended unemployment as the debt that rose with the bubble is settled or a relapse back into a deeper recession.

B. The Effects of the Global Financial Crisis on Islamic Banking

Hassan & Kayed (2009) presented the opinion of Islamic economists who believe that the underlying causes of the crisis were the lack of market discipline due to the absence of the profit and loss sharing concept, in addition to the excessive trade of

derivatives and the unrealistic "too big to fail" belief of financial institutions. Another group of these scholars discuss that moral failure and corruption are interlinked. These come as a result of leverage expansion, speculation, development of complex products, and risk shifting (Hassan & Kayed, 2009).

The Global Financial crisis affected the Islamic banking sector on two levels. The first is the direct effect the crisis had on Islamic banks, while the other reflects the potential lessons these sectors could give to the international financial systems.

Khalaf (2009) believes that the conservative principles of the Islamic banking sector, the absence of structured products, and their reluctance to deal with the sophistications of financial products allowed the immediate effect of the crisis to be smaller compared to the industry as a whole. Reflecting on the restrictive approach followed by Islamic banks, Amr al-Faisal, a board member of Dar al-Mal al-Islami declared " We are more conservative and sober in our investments. That used to be considered a handicap. Now it's considered the height of wisdom. Successful banks have always been conservative lenders" (Hassan & Kayed, 2009).

Despite the relatively strong position these banks held, the drop in the Real Estate market in the Gulf Countries was of major concern to the industry due to the high levels of engagement of Islamic banking in the real estate sector. This is accentuated because of the asset-based nature of Islamic banking.

Standard & Poor's (S&P) discusses that another implication of the Global Financial Crisis was the hit the Sukuk market got whereby the value of these Shari'a compliant certificates dropped from $47.1 Billion in 2007 to $15.5 Billion in 2008 (Hassan & Kayed, 2009). The setback in the Sukuk market between 2007 and 2008

came along with the critical declaration of the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) chairman Sheikh Muhammad Taqi Usmani that nearly 85% of the sold Sukuk may lack compliance with some aspects of Sharia' (McSheehy, 2008).

By the end of 2007, AAOIFI scholars discussed that strict rules could be imposed discouraging the signature of a repurchase agreement (A promise done by the borrower that the face value will be repaid at maturity) underlying most Islamic bonds.

According to Usmani, an agreement of capital payback breaks down the profit and risk sharing principle that should underlie these bonds. He proceeds that the actual consequences of the investment should be dealt with by both parties (Arabian Business, 2007).

Bankers however had a different opinion whereby they believed that the explicit prohibition of these agreements could lead to a huge deal of suffering in the industry. This will shift the debt nature of Sukuk from debt-like instruments into a profit sharing one (Arabian Business, 2007).

The new guidelines that require the legal transfer of the tangible asset ownership from Sukuk issuers to bond holders set by the AAOIFI at the beginning of 2008 and that made Islamic debt issuance harder coincided with the Global Financial Crisis that was already causing borrowing to shrink.

Thus, the disruption in the Sukuk market was caused by the fact that more than one arrow were directed at it during the same period.

Looking at the long term conditions of Islamic banks, S&P argues that the soundness and resilience of the Islamic financial sector rely greatly on the quality of human capital devoted to apply the conditions and regulations of Shari'a sincerely in the work of Islamic banks (Hassan & Kayed, 2009).

On the other hand, the roadblocks that prevent Islamic banks from leading the banking sector are discussed by Chapra (2009) to be the young nature of this financial system. In addition, Islamic banks should expand their funding sources and look for innovative instruments that deal with hedging, liquidity, and risk management, however, are still Shari'a based (Hassan & Kayed, 2009).

The potential growth of Islamic banks in relation to any economic downturn is controversial. As Chapra (2009) believes that this growth has positive implications and allows the Islamic system to have a key role in the market, Loundy (2008) discusses that it's the infancy of this sector that played the critical role of saving it from the crisis (Hassan & Kayed, 2009).

Ahmed (2009) presented the causes that could underlie a financial crisis in the Islamic banking sector. Primarily, the Islamic system of rules is still developing on the institutional level, which limits the possibility of having a better performance that the prevailing financial system. From an organizational perspective, "excessive profit taking and risktaking is difficult to prevent unless the Board of Directors (BOD) and top management impose prudent risk-management practices" (Hassan & Kayed, 2009). The third reason looks at the instruments utilized. Tradable sukuk which are similar in nature to MBS and CDOs (one of the main causes of the financial crisis) are growing at

a fast rate. Thus, Ahmed (2009) urges the Islamic financial regulatory system to promote rules that resolve the shortcomings on all levels (Hassan & Kayed, 2009).

C. Literature Review

Though Islamic banking is considered to be young with respect to conventional banking, the literature looks at several angles especially the 2008 financial crisis. Though a number of studies tackle the question assessing the response of Islamic banking to the crisis, this study attempts to ask the question using a different approach, spanning more countries, and considering a different set of ratios.

Malkoun (2012) looked at Islamic and conventional banks in the Mena region and compared fundamental data between these two industries. The study comprised ten conventional and ten Islamic banks in the region. Financial data of these banks was collected and summed up to create consolidated financial statements for a "Mega" version of each of the two banks. Furthermore, the study entails a ratio analysis that spans profitability, liquidity, credit quality, and capital adequacy. It documents the higher revenue generating powers of Islamic banks as opposed to the conventional and associates this with the higher charged rates (Malkoun, 2012).

Additionally, the liquidity of Islamic banks is viewed to have better standing as to capital reserves. However, conventional banks show a better asset quality. Hence, the study concludes with the higher value the market associates to the Islamic banks due to several reasons especially its foreseen growth potential. The study elaborately discusses the difference between the two industries, but it doesn't deliberately evaluate the state of Islamic banks before and after the crisis (Malkoun, 2012).

The Islamic banking industry promoted itself to a higher position within the banking sector showing the most rapid growth in the credit markets in Islamic countries. This was highlighted throughout a paper by Amba & Almukharreq (2013). The paper highlights the relation between profitability of Islamic banks and the financial crisis through a comparison with conventional banks. Taking into consideration profitability ratios, the study focuses on the performance of GCC countries from 2006 till 2009. Although their research tackles the resilience of Islamic banks to the financial crisis, the approach used falls short of considering Islamic banks in different areas, and doesn't look at the post crisis effect on the financial ratios, tackled in a coming chapter of this project (Amba & Almukharreq, 2013).

In a study concentrated on the Malaysian banking industry, Abdulle and Kassim (2012) evaluated the response of Islamic and conventional banks in Malaysia to the financial crisis using a comparative ratio analysis. The study takes into consideration the performance of 9 conventional banks and 6 Islamic ones over the period extending from 2006 till 2010. Using a number of profitability, liquidity, and credit risk ratios to base their evaluation, the study shows that conventional banks in Malaysia performed slightly better than Islamic ones. This could be attributed to the restrictions Shari'a imposes on the investments and projects the bank is allowed to undergo. However, the study emphasized the superiority of the performance Islamic banks in Malaysia show in terms of liquidity. The net loans to assets ratio was lower for Islamic banks over the five years of the study. Knowing that this ratio depicts the percentage of assets caught up as loans, a lower percentage means higher liquidity. Islamic banks did better in terms of the net loans to deposits and borrowing ratio which is a significant indicator of liquidity as well. The study explains that this performance can be attributed to the limits

set on Islamic investment and their fear of undermining the reputation of Islamic banks in general. The measures included in our project define profitability, liquidity, and credit risk with different and additional ratios and span capital as well (Abdulle & Kassim, 2012).

Similarly, Minianou and Gohou (2011) question the performance of Islamic banking versus conventional banking taking the United Arab Emirates as their focus. The aim behind this study is to assess if Islamic banks in UAE did better during the 2008 financial crisis through looking at the gap between these two industries over two periods (before and after the crisis). This is done through the extraction of balance sheet data for 37 banks in the UAE and a differential framework that deals with conventional banks in terms of a dummy variable. The paper concludes that Islamic banks in the UAE had a weak performance before the crisis, however, they managed to bridge the gap for most of the indicators used (Minianou & Gohou, 2011).

Although this study does consider performance indicators as well, it lies on a different end from ours in terms of content and methodology. Focusing on the UAE only doesn't give complete evidence on the state of a number of Islamic banks in different countries the way our study does. Moreover, the variables on both sides of the regression are essentially different from those depicted later in the paper.

Looking at Islamic finance in the case of Southeast Asia, Venardos (2010) suggests a number of strategies that could enhance the resilience and strength of Islamic banks in order to face economic downturns (Venardos, 2010).

From a theoretical perspective, Jouni (2012) looks at the challenges that face the Islamic banking industry worldwide. The study groups these challenges in two

categories, the first related to financial engineering and the application of Islamic finance principles in an innovative framework, while the other is the aim to increase the efficiency of operations and integrate them within the international capital markets.

One of the challenges the first category incorporates is promoting modern products that comply with Shari'a rules and have a positive impact on liquidity, risk management, and portfolio diversification. These innovations support marketability and aim for an improved Return on Assets (ROA). These conditions allow the Shari'a compliant assets to invade the western market and not remain as a "preferred short term, secured, low-return but liquid investments" (Jouni, 2012).

A technical challenge comes up due to the absence of a benchmark for asset pricing, in addition to the unavailability of a standard model for new products. Recently developed products are confronted by the different thoughts and preferences of the scholars serving the Shari'a board.

The competition between Islamic banks and the conventional opponents differs based on the country they belong to. However, it's one of the widespread challenges that the industry faces. This breaks down into a number of challenges like the complexity of Islamic banking products vis-a-vis those of conventional banks. The required acceptance of a Shari'a committee for any innovative idea complicates the introduction of new products to the market as well (Jouni, 2012).

The challenges may create a good foundation for explaining any conclusion that results from the empirical analysis that will follow in our study. Jouni's study spans a good number of topics related to Islamic banks, however, he focuses on the Lebanese case of Islamic banking.

CHAPTER IV

DATA COLLECTION & METHODOLOGY

A. Empirical Strategy

The response of a number of Islamic banks in different countries to the Global Financial Crisis will be investigated using two approaches.

The study looks at consideration 14 Islamic banks based in a variety of countries. Though the main focus is on the part of the Arab world with banks from Bahrain, Kuwait, KSA, Qatar, and the UAE, Europe and Southeast Asia are represented as well through banks from the United Kingdom and Malaysia.

The first part of the empirical study adopts a descriptive ratio analysis whereby profitability, liquidity, credit risk, and capital adequacy ratios are considered. This approach carries great importance in the evaluation of a bank's performance. It is also the basis of the trend analysis which will help in comparing the state of these institutions over the period of the study. In order to reflect the effect of the crisis on each of these Islamic banks, the comparison will consider the ratios for the periods before, during, and after the crisis that is between the years 2007 and 2012. Variability in these ratios will allow us to draw a conclusion on the nature of the relationship between Islamic banks and economic downturns especially the financial crisis depicted in this study.

On the other hand, a set of regressions will be performed on the sample though small to uncover the relationship between a group of these ratios and the macroeconomic indicators of the countries the banks belong to. The coefficients will reveal a conclusion that is indicative of the relationship between the banks under study and the economy.

Because the data looks at the behavior of fourteen banks in seven countries over six years, it falls in the category of regular balanced panel data. This will be dealt with accordingly.

The ratios and figures will be dealt with as the dependent (explained) variables, while the macroeconomic indicators (GDP, GDP growth rate, Unemployment rate..) are considered the independent (explanatory) variables. Moreover, the regression will include a dummy variable that takes a value of zero for the years before and after the crisis and the value of 1 for the year of the crisis (2008).

Upon determining the relationships, a series of hypothesis tests will be performed in order to determine the significance of each of these estimated coefficients, placing the conclusion in an appropriate frame.

This illustrates the relationship between the performance of a number of Islamic banks and the state of the economy.

B. Data

The 14 banks chosen come from a diversity of countries. The names of these banks, their country of origin, and their year of establishment are highlighted in the following table:

Table 1: List of Banks

Bank's Name	Country of Origin	Year of Establishment
Al Rajhi Bank	Saudi Arabia	1957
Dubai Islamic Bank	United Arab Emirates	1975
Bank Al Jazira	Saudi Arabia	1976
Kuwait Finance House	Kuwait	1977
Bahrain Islamic Bank	Bahrain	1979
Qatar Islamic Bank	Qatar	1982
Qatar International Islamic	Qatar	1991
Abu Dhabi Islamic Bank	United Arab Emirates	1997
Al Baraka Banking Group	Bahrain	2002
Boubyan Bank	Kuwait	2004
Bank Al Bilad	Saudi Arabia	2004
HSBC Amanah (Malaysia) (2008)	Malaysia	2004
Islamic Bank of Britain	United Kingdom	2004
RHB Islamic Bank (Malaysia)	Malaysia	2005

Source: Company Overview

Due to the restricted number of publically traded Islamic banks and their young nature, the choice of these institutions focused on more developed banks that were already in existence before the crisis noting that a number of Islamic banks recently entered the market. The good standing of these banks relative to others in the industry was highlighted through market capitalization. This indicator is calculated by multiplying the current share price by the total number of shares outstanding. Al Rajhi turned out to have the highest Market Cap with $29,698 Million (Bloomberg, 2014), while Bahrain Islamic Bank revealed a low $373.52 Million (Gulf Base, 2014).

The variables highlighted in the ratio analysis are classified into 4 categories. The profitability ratios include: Net Profit Margin, Return on Assets (ROA), Leverage Multiplier, and Return on Equity (ROE). The liquidity ratios are: Net cash position and Net Loans to Deposits. The credit quality ratios are: NPL Ratio and Provisions to average loans. The capital ratios will involve the Capital Adequacy Ratio only.

The time period considered will include the years 2007 till 2012. This allows the study to span three periods: the period prior to the crisis (2007), during the crisis (2008-2009), and after the crisis (2010, 2011, 2012).

Annual data is collected. Some of the ratios are already calculated and appear as figures in the annual reports of each of the banks. Other ratios are calculated based on data extracted from the published financial statements of these banks and from the Gulf base database.

The macroeconomic indicators that include real GDP, GDP growth rate, inflation rate, unemployment rate, money and quasi money growth, and total reserves of each country are taken from the database of the World Bank.

C. Methods

1. Ratio Analysis

After collecting and calculating the nine ratios under study, these will be tabulated and graphed for each bank in order to view the trend and fluctuations in each of these variables.

For profitability and liquidity ratios, growth rates will be calculated to highlight the size of the change aiming to show the strength of the effect of the crisis. These two categories of ratios were chosen in order to determine the direction in which the crisis affected the gains of these banks and their capability to serve clients' demand of money.

a. Profitability Ratios

The profitability performance of each of these Islamic financial institutions will be assessed based on the trend followed by its "Profitability Ratios".

Technically, these ratios are defined to be a category of financial metrics utilized in the evaluation of an institution's capability to create revenues with respect to other expenditures and costs due over a specific time lapse. An increase in these ratios indicates that the bank is moving in a positive direction in terms of returns ("Investopedia.com: Profitability Ratios").

i. Net Profit Margin

$$Net\ Profit\ Margin = \frac{Net\ Income}{Total\ Revenues}$$

This ratio measures the amount of each dollar of revenues the bank redeems as profits ("Investopedia.com: Profit Margin"). It reflects the percentage of net income that is left for the bank from its interest and noninterest income after paying all its costs.

ii. Return on Assets (ROA)

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

This ratio reflects the profitability of a company with respect to its total assets. It indicates the bank's efficiency in making profits from its total assets.

iii. Leverage Multiplier

$$Leverage\ Multiplier = \frac{Total\ Assets}{Common\ Equity}$$

The financial leverage ratio indicates the bank's usage of debt in financing its assets. Higher financial leverage reflects the increased reliance of a bank on debt in the process of asset financing ("Investopedia.com: Financial Leverage Ratio"). Contrary to conventional banks where debt is interlinked with interest payment, Islamic banks adopt Islamic debt instruments in order to ensure that borrowing remains Sharia' compliant. Those instruments take the form of corporate Sukuk or term financing certificates. The concept of these certificates allows the redemption of the principal amount by the holder throughout the period of the contract and not necessarily at the end. An example of these is the negotiable debt Islamic certificate which is a form guaranteeing that a

certain amount of money will be paid back on demand or at the end of a pre specified date. This type of instruments is interlinked with the deferred payments sale Islamic contract (Bay' bithaman ajil). The bank issues in this case a certificate to the customer as a proof of the debt the bank owes to the customer (Jamaldeen, 2012).

iv. Return on Equity

$$ROE = \frac{Net\ Income}{Common\ Equity}$$

It's one of the primary accounting indicators reflecting shareholder wealth. It measures the rate of return shareholders receive. This ratio highlights a bank's profitability through calculating the profit the institution makes with the invested money of shareholders.

b. Liquidity Ratios

After defining the profitability ratios that will be studied further in the coming chapters, we present some of the ratios used in the assessment of an institution's liquidity.

By definition, liquidity is "how quickly a bank can convert its assets into cash at face value to meet the cash demands of depositors and borrowers" (Abdulle & Kassim, 2012).

Liquidity ratios are usually used in the appraisal of liquidity risk. This represents the chances of loss a bank might face due to the unavailability of cash or cash

equivalents to satisfy customers' needs, the lower yield the sale of illiquid assets will return, and the absence of buyers not allowing the sale of these illiquid assets to be done at the required time ("Businessdictionary.com: Liquidity Risk").

i. Net Cash Position (NCP)

$$Net\ Cash\ Position = \frac{Cash + Due\ from\ Banks - Due\ to\ Banks}{Total\ Assets}$$

This indicator complies with the exact definition of liquidity. It measures the fraction of liquid assets of a bank to the total assets. The liquid assets include cash available at the bank in addition to the net interbank lending status.

ii. Net Loans to Deposits

$$Net\ Loans\ to\ Deposits = \frac{Net\ Loans}{Deposits}$$

This ratio is commonly used in evaluating liquidity. It measures the percentage of deposits that is caught up into loans. It reflects how efficient a bank is in transforming the interest bearing deposits into interest earning loans.

A higher net loans to deposits ratio indicates lower degrees of liquidity, yet higher profitability. However, a very low ratio is indication of capital being unproductive and yielding a lower level of earnings.

c. Credit Quality Ratios

These ratios reflect credit risk. Credit risk is the risk associated with the bank's loss of the principal borrowed and any additional payment related to it (fees..) that takes place when a borrower fails to settle a loan or defaults on a number of payments. This risk is highlighted when a borrower aims to repay the current debt through potential cash flow ("Investopedia.com: Credit Risk").

i. Nonperforming Loans Ratio (NPL)

$$NPL\ Ratio = \frac{Nonperforming\ Loans}{Gross\ Loans}$$

Nonperforming loans are the loans whose interest or principal repayment are 90 or more days past due. These also include loans with restructured interest income (delayed, refinanced, or capitalized), and loans that haven't been overdue for 90 days yet the bank has reasons to doubt full payment (IMF, 2005).

Hence, this ratio reflects the fraction of the total loan book that is redeemed to be non performing i.e. doubtful in the bank's portfolio. A lower ratio indicates a better performance in terms of credit quality.

ii. Provisions to Gross Loans

$$Provisions\ to\ gross\ loans = \frac{Provisions\ Charge}{Gross\ Loans}$$

In order to face any risk of default, banks usually keep reserves aside for any losses in the future. Provisions on loans are defined in terms of the expenses banks save as an allowance for bad debt. These fall in two categories; the general and the specific. While the general is the portion taken aside with every new loan the bank gives, the specific considers loans that are foreseen to have potential problems and carry more risk than others. Provisions are deducted from the operating income of the bank which appears on the income statement (Malkoun, 2012). On the other hand, this ratio signifies the share of gross loans that is saved aside for provision charges revealing the yearly risk cost a bank bears for holding its loan book.

d. Capital Related Ratio

Furthermore, one of the highly important ratio categories the study will deal with is capital through studying the trend of the capital adequacy ratio.

This concept denotes the bank's net worth. It reflects the level towards which creditors are cushioned in case of asset liquidation.

i. Sources of Capital

Capital doesn't necessarily have a single source. Though the first idea that comes to mind when discussing these sources are the funds that accumulated along with investors purchasing stocks in the bank, retained earnings which are reinvested in the bank and not paid to stockholders in the form of dividends makeup another source.

ii. Roles of Capital

Capital founds the basis of the institution's primary investments and creates the framework for starting the bank's transactions. On the other hand, the role capital plays as a cushion against risk makes holding a safe capital position a must. Moreover, it allows borrowing and raising capital to become relatively easy through raising public confidence. In addition to that, sufficient capital base paves the way for the growth and expansion of the assets and transactions of a bank while regulating the level of growth and risk undertaken (Malkoun, 2012).

iii. Capital Adequacy Ratio

$$Capital\ Adequacy\ Ratio = \frac{Total\ Capital}{Risk\ Weighted\ Assets}$$

This ratio measures the capital strength of a bank.

2. Regressions

Macroeconomic and other financial indicators play an important role in reflecting the state of an economy. This was highlighted in the case of the United States whereby real GDP dropped by 6% in 2008's fourth quarter while the rate of unemployment rose by 10.1 % in 2009.

Therefore, in order to depict the relationship between each of the 14 banks and the state of the economy, an econometric approach that focuses on the panel nature of the data will be adopted.

The profitability, loans to deposits, non performing to gross loans (NPL), and capital adequacy ratios will be regressed on a number of macroeconomic indicators that include Real GDP per Capita, GDP growth rate per Capita, inflation rate, and unemployment rate, and two financial indicators; the money and quasi money growth, and total reserves.

The form of the Panel Data Regression will be:

$$Y_{it} = \alpha_0 + \alpha_1 X_{1it} + \alpha_2 X_{2it} + \alpha_3 X_{3it} + \alpha_4 X_{4it} + \alpha_5 X_{5it} + \alpha_6 X_{6it} + \alpha_7 d_{it}\, \varepsilon$$

Y represents the Dependent Variable (Financial Ratio)

The X terms represent the Independent Variables

X_1: GDP (USD) Per Capita

X_2: GDP Growth Rate Per Capita

X_3: Inflation Rate

X_4: Unemployment Rate

X_5: Money & Quasi Money Growth

X_6: Total Reserves (USD)

The d term represents a dummy variable that takes the value 0 for all the years of the study and 1 for the year of the financial crisis (2008)

α_0 represents the Intercept Coefficient

α_1... α_7: Coefficients

The subscript "i" represents different cross sections considering the 7 countries

{i=1,2,3,……..,7}

The subscript "t" represents different time periods considering the 6 years of the study

{t=1,2,3,…,6}

Ordinary Least Square Estimation (OLS) will be performed in order to estimate the coefficients, and determine the impact of each of the right hand side variables on the left hand side financial ratios.

In addition to the above regressions, a set of fixed effects regressions are run in order to determine the effect of each right hand side variable within bank.

In order to estimate the coefficients, fourteen dummy variables are generated to identify each of our banks. After completing the estimations, the validity of this method needs to be tested in order to decide whether each group should have a different intercept or the common constant OLS method works better. The null hypothesis assumes that all constants are homogeneous.

This preferred method will allow us to draw better conclusions on the relationship between the financial ratios and the various indicators of the economy each of the banks belongs to.

D. Limitations

Dealing with data can always have a number of limitations especially on the reporting side. This is especially true with Islamic banks because Central Banks in general don't provide these banks with specific reporting techniques that comply with their Shari'a principles, but impose on them the same reporting rules conventional banks follow.

The first limitation lies in the distortion of data. Certain institutions, especially newly established ones, tend to apply certain modifications to their numbers before reporting them in order to enhance their standing. Such inaccurate input can lead to distorted results and misleading analysis and conclusions. This affects our choice of banks. One of the reasons underlying the inconsistent and sometimes misleading reports by some Islamic banks goes back to the requirements Central banks impose on this young industry. The relationship between Islamic and Central banks varies depending on the country these banks belong to. In some countries, Islamic banks are dealt with according to special legislations that differ from those of conventional banks. However, others still adopt the conventional approach while dealing with these banks not taking into consideration the uniqueness of their transactions and their limited scope of investment (Financial Islam, n.d.).

The inability of Islamic banks to meet the conventional based targets pushes reporting inconsistency problems to arise especially in newly established banks that need to enforce their presence in the market.

The need to comply with Central banks and Sharia' rules at the same time puts these banks in a state of conflict whereby most Central banks lack the guidelines that

concern Sharia' compliant institutions. Though such type of conflicts is not totally avoidable, a distinctive approach should be adopted by the Central bank in several areas especially dealing with the reserve requirements noting that Islamic banks do not receive interest on these, liquidity ratios, distribution of Islamic banks' profits, credit ceilings, and several other requirements (Financial Islam, n.d.).

Another problem is the unavailability of data. The numbers needed aren't available for all the Islamic banks, and if available, they don't extend back to a long period before the crisis, which stands in the way of a depicting any long-term trends. This affects our choice of years.

The other limitation deals with the second empirical approach, whereby some factors may have an effect on both the right hand side and the left hand side variables at the same time. This can cause a misestimated coefficient. We try to avoid omitted variable bias as much as possible.

CHAPTER V

RATIO ANALYSIS & VALUATION

In Chapter IV, we describe the data we have collected on ratios and the process of analyzing their trends. Throughout this chapter, we report the yearly average of each ratio, using as weights the relative size of each bank. The size of each of the 14 banks under study was calculated based on the average size of its assets over the years 2007 till 2012. Table 2 shows these averages in addition to the corresponding weights in descending order.

Table 2: Relative Size of Banks according to their Assets

Bank's Name	Average Size of Assets (in USD)	Weight
Al Rajhi Bank	51,007,525, 605	0.24209
Kuwait Finance House	42,535,256,500	0.201
Dubai Islamic Bank	23,840,380,305	0.1131
Abu Dhabi Islamic Bank	17,756,594,010	0.0842
HSBC Amanah	17,519,988,000	0.0831
Al Baraka Banking Group	14,379,941,833	0.06825
Qatar Islamic Bank	12,486,146,985	0.0592
Bank al Jazira	9,086,998,050	0.04312
Bank al Bilad	5,792,407,875	0.02749
Qatar International Islamic Bank	4,878,458,595	0.0231
RHB Islamic Bank	4,517,566,200	0.02144
Boubyan Bank	4,318,648,458	0.0204
Bahrain Islamic Bank	2,231,523,925	0.01059
Islamic Bank of Britain	343,486,587	0.00163

Source: Company Data, Author's Calculations

The graph of each of the following ratios depicts the variability in its trend over the six years of the study.

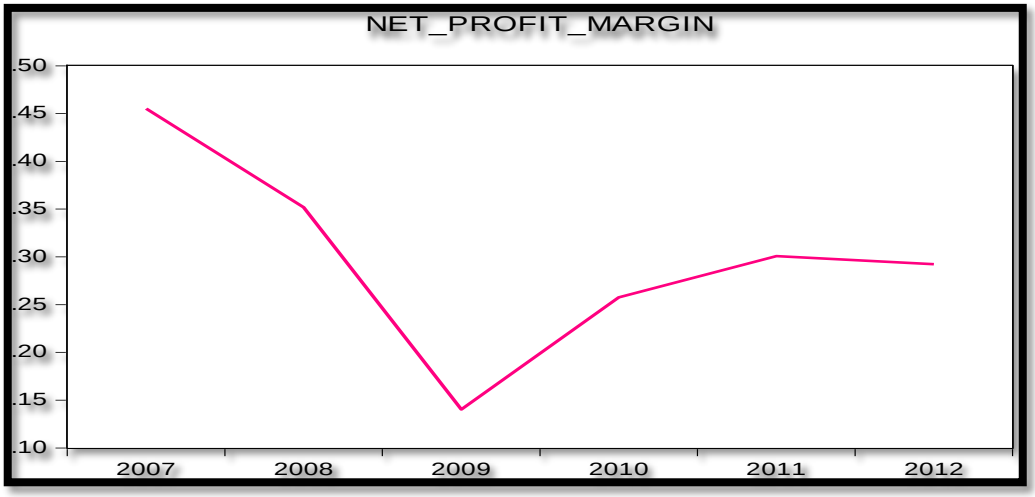
A. Profitability Ratios

1. Net Profit Margin (NPM)

One of the common ratios to measure a bank's profitability is the net profit margin. This ratio shows the percentage of a bank's revenues that is redeemed as net income ("Financeformulas.net: Net profit margin"). A higher value of this ratio is indicative of a high profit generating capability and serves as a cushion for the institution during economic downturns (The American Association of Individual Investors, 2014).

The net profit margin varied to a large extent between 2007 and 2012. Chart 1 shows that NPM dropped from 0.45 in 2007 reaching its lowest level in 2009 at 0.1404. Signs of recovery were clear through the increase between 2010 and 2012 whereby NPM reached 0.3 in 2011 and slid slightly to 0.2924 in 2012.

Chart 1: Net Profit Margin



Source: Company Data, Author's calculations

The weighted NPM of the 14 Islamic banks dropped around 69.15% between 2007 and 2009. This drop came along as the negative effects of the global financial crisis were spreading over numerous sectors of the economy. The drop in NPM showed that the net profits of these banks were hit hard during the crisis, and the banks were redeeming a smaller percentage of their revenues as profits after paying all their costs. However, the chart depicts a sharp increase in NPM between 2009 and 2010. Though the rate of growth was larger between these 2 years as reflected by the slope, NPM kept on increasing between 2010 and 2011. Despite the slight drop between 2011 and 2012, the ratio grew around 108.26% between 2009 and 2012. Thus, it showed clear signs of recovery in the profitability of these Islamic banks, especially that it took less than 2 years to head back to around 64.25% of their pre crisis levels.

Although the average net profit margin decreased significantly between 2007 and 2009, it maintained a positive level indicating that this group of banks remained profitable on average. This confirms what was discussed by Malkoun (2012) that Islamic banks' overall returns exceeded those of their conventional counterparts showing their capacity to carry on profitable activities with lower costs despite the crisis (Malkoun, 2012).

The revenue generating capabilities of some banks were hardly hit, and this was noted by the negative NPM for Boubyan Bank, Bahrain Islamic Bank, and Islamic Bank of Britain. However, the other banks maintained their ability to have positive profits despite the economic turmoil. This hints that the strategies adopted by these banks serve as cushions that reduce the intensity of any break down and ensure that the bank faces instabilities.

Apart from the trend of the average NPM that decreases till 2009 and starts recovering afterwards, the NPM of Qatar Islamic Bank, Kuwait Finance House, Bahrain Islamic Bank, and RHB Islamic Bank didn't show signs of recovery on the contrary, these kept a decreasing trend.

2. Return on Assets (ROA)

The return on assets is another ratio that is commonly used to illustrate profitability. It signifies the bank's efficiency in translating assets into returns (Malkoun, 2012).

Chart 2 illustrates the variability in ROA between 2007 and 2012.The ratio decreases from 0.0356 in 2007 to 0.0168 in 2009. This reflects the drop in net profits as well that came with the global financial crisis.

The 53% drop in this ratio wasn't reversed through the years following 2009. This doesn't only go back to the decrease in net income that accompanied the crisis, but to the increase in the total assets of each of the Islamic banks under study which is depicted in Chart 3. A nearly horizontal trend is depicted between 2009 and 2012 whereby weighted ROA reaches a maximum of 0.0171 in 2011 and drops by around 6% to reach 0.0161 in 2012. This shows that ROA doesn't seem to converge back to its pre crisis levels over the years of the study indicating a decrease in efficiency and a deterioration in the banks' ability in earning rent from their total operations.

In order to understand the reasons underlying the changes in ROA, technically, a decomposition of this ratio takes place. The return on assets ratio could be broken down into 2 components: a profit margin and a turnover ratio according to the following formula:

$$ROA = \frac{Net\ Income}{Total\ Assets} = \frac{Net\ Income}{Sales} \times \frac{Sales}{Total\ Assets}$$

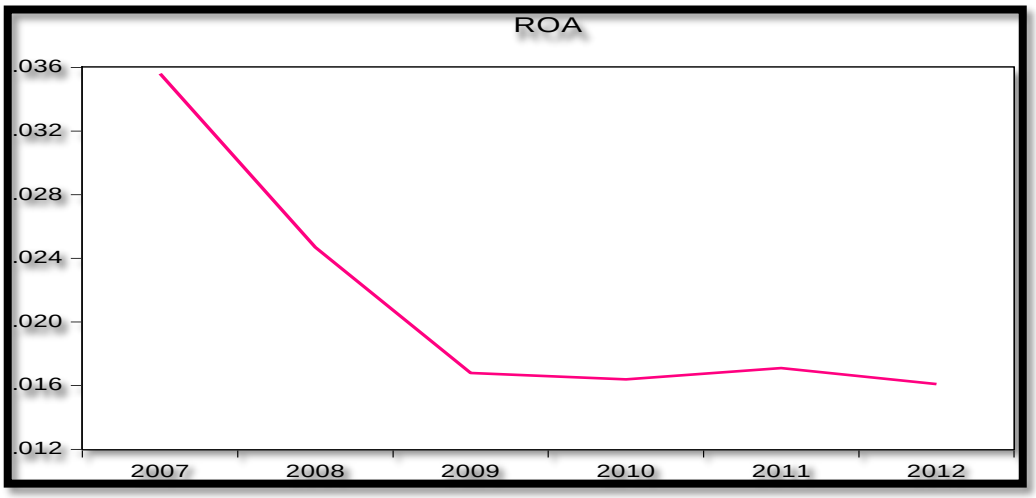
Hence, the ambiguity of the reasons behind the variation in ROA could be minimized by looking at the components of this ratio. In the case of Islamic banks, the previous section highlighted the variability in the net profit margin which represents the first component in the ROA decomposition.

Chart 1 shows that NPM decreases between 2007 and 2009, however, the 14 Islamic banks manage to reverse these negative effects on average in the following years. The decrease in NPM is obvious in Chart 2 as well whereby the return on assets dropped significantly between 2007 and 2009. However, ROA didn't follow up with the increase in NPM between 2009 and 2012, this could be related to the second component of the ratio whereby the average assets of these Islamic banks kept an increasing trend shown in Chart 3.

The level of assets of some banks was constantly increasing between 2007 and 2012 whereby it nearly doubled or even more for Abu Dhabi Islamic Bank, Qatar Islamic Bank, Qatar International Islamic Bank, Al Rajhi Bank, and others. Chart 3 shows that the average level of assets increased by nearly the same ratio. However, the growth in net profits failed to happen at a rate that covers the growth in assets, which kept the return on assets decreasing.

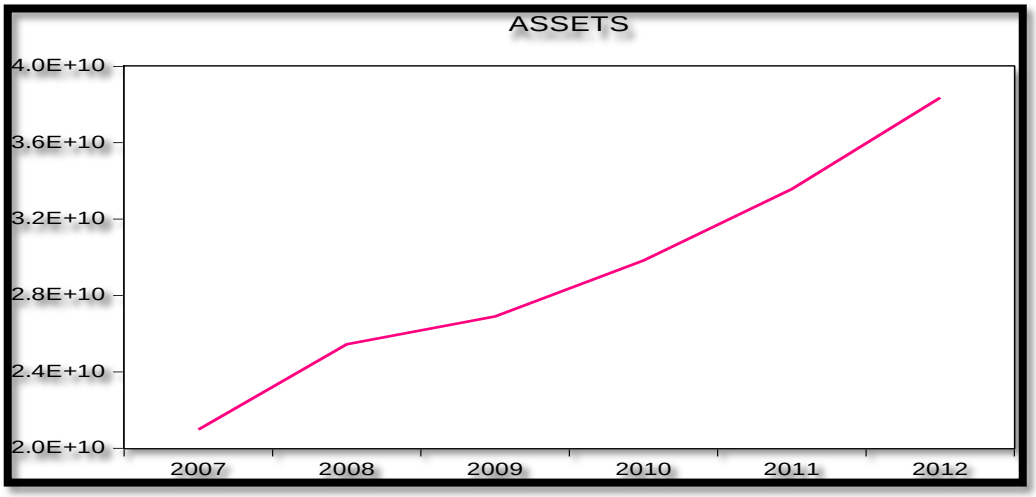
Despite the fact that all the banks encountered growing levels of assets, some didn't adopt a similar trend to the average ROA. The return on assets of Abu Dhabi Islamic Bank, Boubyan Bank, and Bank Al Bilad increased after 2009 while the Islamic Bank of Britain showed an alternating level of ROA between 2009 and 2012.

Chart 2: Return on Assets



Source: Company Data, Author's Calculations

Chart 3: Average Total Assets



Source: Company Data, Author's Calculations

3. Leverage Multiplier

The third ratio that evaluates the profitability position of the banks is the financial leverage ratio. The higher the ratio the more reliant the bank is on debt to finance its assets.

Technically, financial leverage plays a role in increasing the return on equity if the rate of return earned on the invested funds exceeds the cost of debt financing them. However, a drawback of this leverage lies in the rising risk of financial distress especially that debt payments are prioritized over those of equity ("Profitability Ratio Analysis", n.d.).

Thus, the trend depicted in Chart 4 tends to follow a unique direction compared to the other three profitability ratios throughout the years of this study.

The leverage multiplier keeps nearly the same value of around 6.95 between 2007 and 2008, however, after 2008, they follow an increasing trend.

The leverage multiplier increased around 24% between 2007 and 2012 reaching around 8.63. This increase shows that throughout these 6 years the 14 Islamic institutions in the study became more dependent on debt in financing their assets.

This increase comes along with the global financial crisis as well especially that the inflection point occurs at the end of 2008. Moreover, the slope of the graph doesn't show any change in sign after 2009, hence, no indication of a return to the pre crisis level over the 3 years following the downturn, and this group of banks' is diverting to increase its reliance on debt to finance its assets.

In general, financial leverage imposes extra risk on common shareholders due to the increased debt obligations the bank incurs in order to receive higher return.

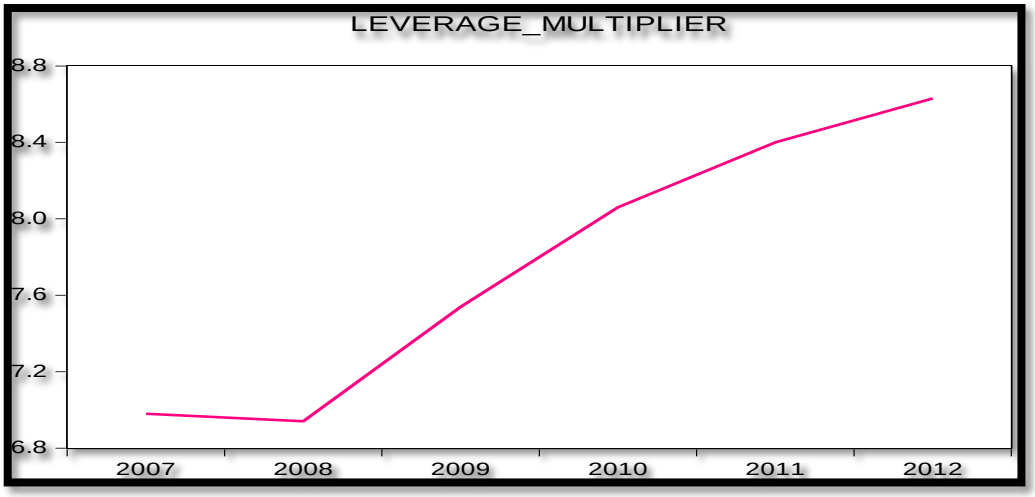
Adding more debt to the capital structure raises the default and insolvency risks. A higher return is thus required by lenders as a compensation for this added risk.

Financial leverage is beneficial for common shareholders if the capital introduced by preferred shareholders and creditors yield a return that exceed the payments made to these two parties.

However, a certain level of financial leverage is reached by the bank whereby the potential rate of return to common shareholders' equity couldn't be increased further. This takes place when the cost of debt is higher than the rate of return on assets. Hence, this increase in the average leverage multiplier of the 14 Islamic banks is acceptable as long as it doesn't mushroom in a manner that no longer serves the return on equity or puts the group under critical capital risk. This risk is defined to be the risk of losing the value of its capital a bank faces ("Investopedia.com: Capital Risk).

Inspecting the leverage multiplier of each bank individually, the variability of HSBC Amanah's leverage multiplier doesn't comply with the average trend of the leverage multipliers of the 14 Islamic banks together whereby the multiplier decreases between 2007 and 2009 and goes back to increase afterwards.

Chart 4: Leverage Multiplier



Source: Company Data, Author's Calculations

4. Return on Equity (ROE)

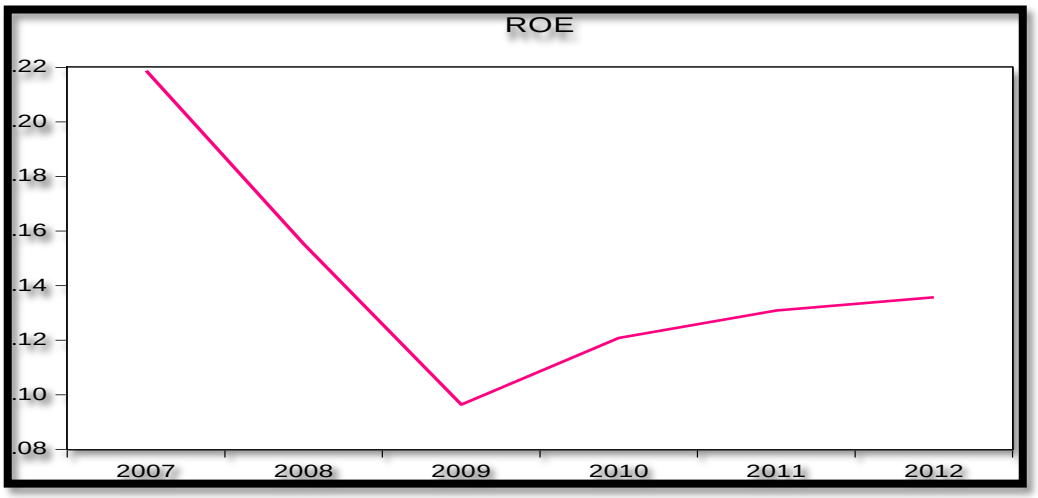
The last profitability ratio we consider is the return on equity. This metric measures the net return to shareholders' equity and the effectiveness of a bank's management in benefiting from the investment of shareholders.

Chart 5 shows that there's a perfect linear decrease between 2007 and 2009. ROE drops by around 56% from 0.21188 to 0.0964. In 2010, ROE shows an increasing trend. Though the increase wasn't at a fast rate; a fact highlighted by the small slopes of the lines, ROE grew around 41% between 2009 and 2012. However, 3 years after reaching the lowest ROE levels, the Islamic banks didn't manage to totally eliminate the effects of the crisis and get back to the 2007 levels.

Hence, this provides additional evidence that the global financial crisis did have a negative effect on the profitability metrics, however, their pre crisis levels in addition to the principles adopted by these banks served as a supporting base that prevented them from a total breakdown.

The decrease in ROE was clear for all 14 Islamic banks between 2007 and 2009, this complies with the NPM which is one of the components of this ratio following a breakdown similar to that of the ROA. However, the ROE of Qatar Islamic Bank, Qatar International Islamic Bank, Kuwait Finance House, and Al Rajhi Bank though positive didn't show any signs of recovery during the years that followed the crisis. Moreover, Bahrain Islamic Bank kept a negative and decreasing ROE, this could go back along with the financial crisis to the political turmoil that hit the country in 2011.

Chart 5: Return on Shareholders' Equity



Source: Company Data, **Author's Calculations**

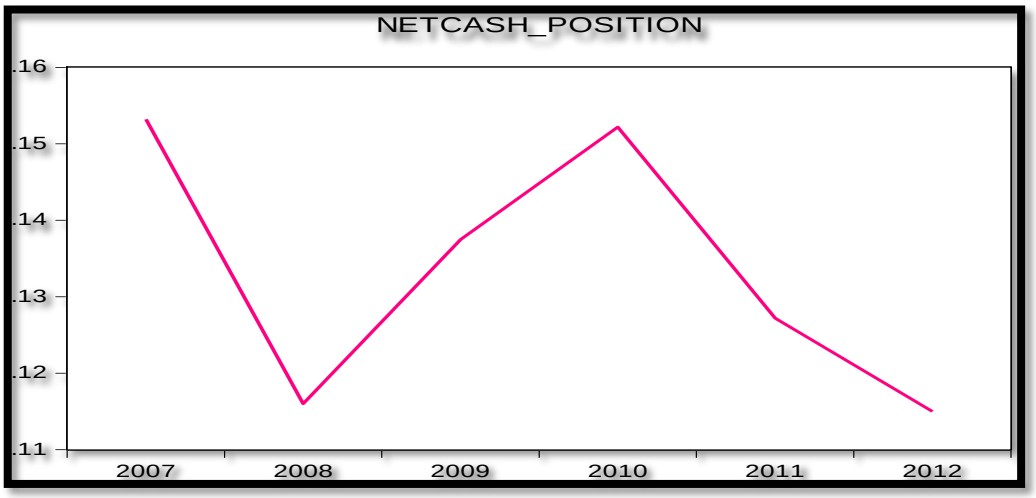
B. Liquidity Ratios

1. Net Cash Position

In order to assess the liquidity of the group of banks in our study, the variability of the Net Cash Position ratio is evaluated. This ratio reflects the level of highly liquid assets held by these banks. It measures the amount of cash the bank holds in order to repay its most immediate liabilities. Adding the net interbank position provides us with a more accurate figure of the cash position due to the high liquidity of the interbank market (Malkoun, 2012).

Chart 6 illustrates the fluctuation in net cash position between 2007 and 2012. This ratio doesn't maintain a stable trend over these six years. It drops around 25% from 0.1532 in 2007 to 0.116 in 2008. The ratio goes back to increase to 0.1375 in 2009 and reaches its pre crisis level again in 2010 before it goes back to decrease 25% between 2010 and 2012.

Chart 6: Net Cash Position



Source: Company Data, **Author's Calculations**

The fluctuating trend of the Net Cash Position doesn't allow us to draw a clear conclusion about the relationship of this ratio and the financial crisis. The level of liquidity reflected by cash dropped between 2007 and 2008, however, it showed signs of recovery in 2009 at the time where the effects of the crisis were becoming obvious on profitability indicators. The liquidity of these 14 institutions didn't seem to be hit hard between 2007 and 2009 despite the fact emphasized by the literature that the financial crisis did cause a squeeze in liquidity (Chudik & Fratzcher, 2012).

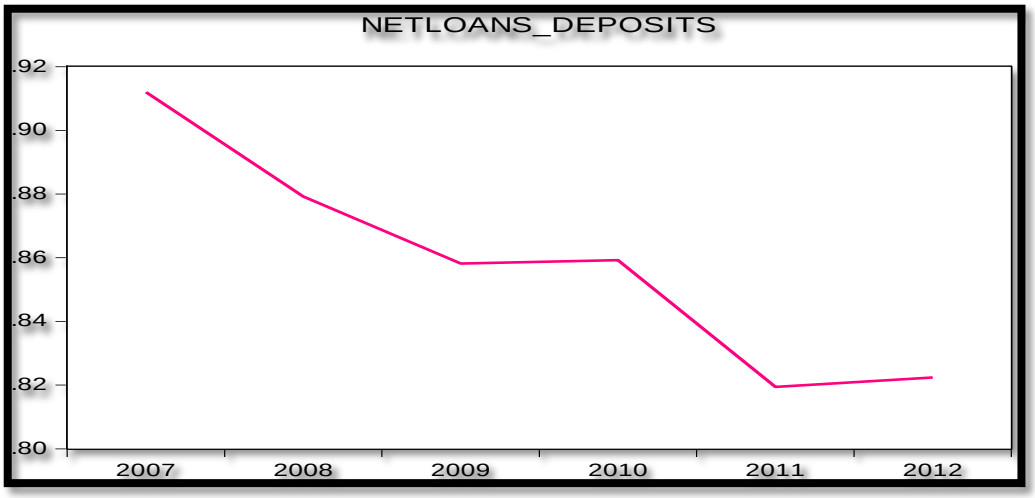
The fluctuations show that this group of banks is trying to revert to a certain average. This could be explained in terms of the resilience of these banks to the crisis through maintaining a certain level of liquidity. Moreover, it could go back to the aim of these banks to avoid any loss that might result from a run on a bank during periods of economic downturns, and to decrease their vulnerability to any liquidity risk that might undermine the reputation of Islamic banks in general.

2. Net Loans to Deposits

This ratio is another indicator of the liquidity performance. It has to fall within a certain boundary in order to ensure sufficient liquidity for any request by its customers. Measuring the percentage of customer deposits caught up in loans, any extremely low ratio though ensures high liquidity, hints that the bank isn't earning as much as it should be.

The Net Loans to Deposits ratio recorded its highest level in 2007 reaching 0.91201. It dropped around 6% to reach 0.8518 in 2009. Chart 7 shows that the ratio kept a decreasing trend hitting its lowest level in these 6 years in 2011. It went back to increase from the low 0.81941 to 0.82240 in 2012.

Chart 7: Net Loans to Deposits Ratio



Source: Company Data, Author's Calculations

The Net Loans to Deposits ratio doesn't seem to go back to its pre crisis levels over the period of the study. This indicates that the 14 banks are trying to maintain a higher level of liquidity than that they adopted before the global financial crisis.

The group of banks in this study started holding a lower Net Loans to Deposits ratio over the term of the crisis and after it, allowing liquidity to increase. Hence, the level of liquid assets held by banks is viewed to be increasing, decreasing the exposure to liquidity risk.

The increasing levels of liquidity reflected by this ratio could be explained in several ways; one of which is the aim of these banks to maintain a level of liquidity that would serve as a cushion against any liquidity slip over the course of the global financial crisis. This comes in line with Malkoun's discussion that Islamic banks made sure they kept an adequate buffer for their liquidity (Malkoun, 2012). Moreover, these Islamic banks' level of liquidity could be associated with the limited scope and restricted set of investments Islamic banks have in general (Abdulle & Kassim, 2012).

Some of the banks in the study don't follow the decreasing trend in the average Net Loans to Deposits ratio. The ratio increases between 2007 and 2010 for Dubai Islamic Bank and HSBC Amanah. However, it alternates over the six year period for Abu Dhabi Islamic Bank, Qatar Islamic Bank, Bank Al Jazira, and Bahrain Islamic Bank.

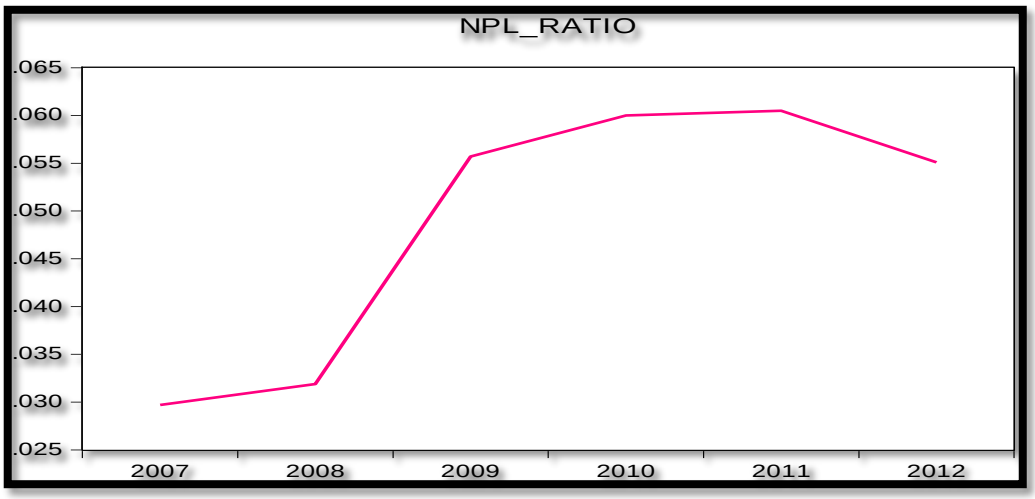
C. Credit Quality Ratios

1. Nonperforming Loans Ratio(NPL)

The process of evaluating the credit quality of the banks under study includes the computation of nonperforming to gross loans ratio. This ratio presents the fraction of gross loans that is rendered nonperforming. NPL is redeemed to be an important assessment indicator for the quality of loans of these Islamic institutions.

Chart 8 indicates that the average NPL of the sample increased between 2007 and 2011 and went back to decrease in 2012. The average proportion of gross loans which was doubtful in these banks' portfolio was 0.0297 in 2007. This increased around 88% to reach 0.0557 in 2009. The ratio continued increasing between 2009 and 2011 reaching 0.0605 at most. It goes back to drop around 9% reaching around 0.0551 in 2012.

Chart 8: Nonperforming Loans Ratio



Source: Company Data, Author's Calculations

The low NPL in 2007 reflects a good quality of assets and proper credit performance. However, the increase in this ratio reflects a deterioration in credit quality whereby a greater share of the gross loans doesn't earn the bank income anymore and is under the risk of being written off for default. This came along as the global financial crisis was spreading over realms of the economy indicating that this downturn did contribute to the variation of this ratio, increasing credit risk.

Despite the considerable growth rate of this ratio between 2007 and 2009, NPL didn't overshoot in an exponential manner, and though it didn't revert back to its pre crisis level, the decrease between 2011 and 2012 is a good indicator.

While the fraction of nonperforming loans to gross loans was increasing on average, Qatar Islamic Bank and Qatar Islamic Bank showed an opposing trend that decreased over the course of the study.

2. Provisions to Gross Loans

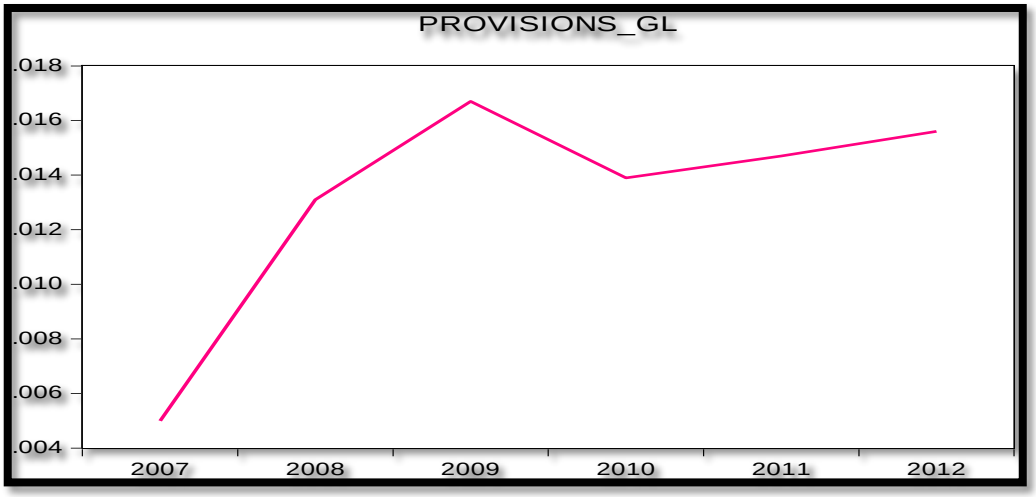
This ratio looks at the portion that is deducted from the income statement as a provision charge with respect to the gross loan portfolio.

The numerator of this ratio shows changes in the quality of the loan portfolio in addition to the difference in the size of this portfolio (Grier, 2007).

Chart 9 illustrates the changes in provision charges with respect to gross loans over the period before, during, and after the crisis. The ratio starts at its lowest level of 0.005 in 2007. It grows by nearly 234% to reach 0.0167 in 2009. This could hint that the increase in charges is related to the financial crisis especially that it coincided with the time when the effect of the crisis started rooting in the economies of various countries.

The ratio then decreases slightly between 2009 and 2010 before it goes back to adopt an increasing trend between 2010 and 2012 growing 12%.

Chart 9: Provisions to Gross Loans Ratio



Source: Company Data, **Author's Calculations**

Provisions to Gross Loans ratio is interlinked with return ratios whereby an increase in provisions charge drains net income, hence affecting a number of profitability indicators. The increase in Provisions to Gross Loans between 2007 and 2009, comes along with the drop in profitability indicators discussed in a previous section.

The increase in this ratio could be read in terms of credit quality, since the banks lost a higher percentage of their gross loans in the process of covering the provision charges of impaired loans. This points the arrow towards a relation between the financial crisis and the response of our sample, and suggests that even the clients of the 14 Islamic banks had higher chances of delayed or default payment.

The Provisions to Gross Loans ratio showed an average trend that was increasing overall except between 2009 and 2010, however, Qatar International Islamic Bank, Boubyan Bank, Bank al Bilad, Islamic Bank of Britain, and RHB Islamic Bank showed a trend with alternating variability that didn't keep the same sign over six years.

D. Capital Related Ratio

1. Capital Adequacy

One important component that evaluates the wellbeing of these Islamic institutions, reflects the sufficiency of the banks' permanent funds to neutralize risks, and indicates the level of reserves the bank bases its growth on is capital (Fitch Ratings, 2009).

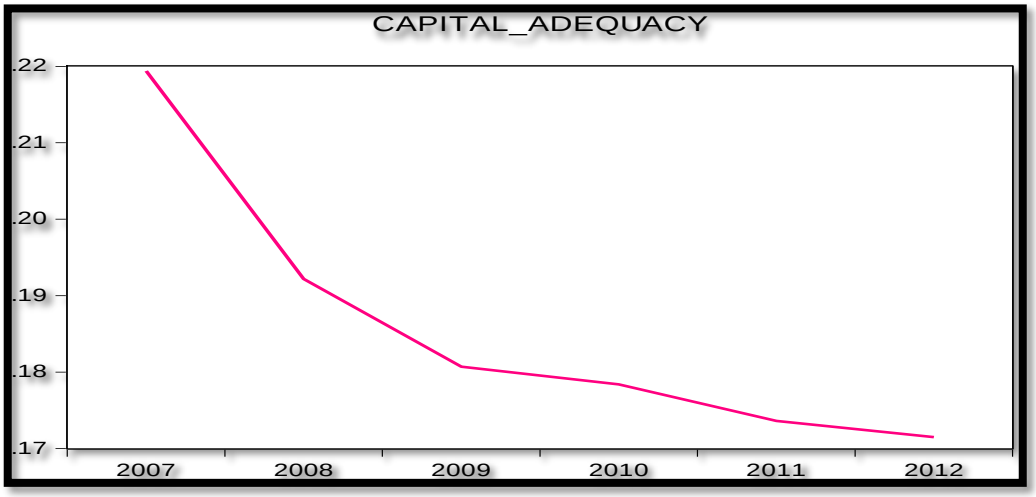
The role of capital isn't limited to the above, however, it controls the growth rate of banks thus promoting self control in order for the bank not undertake risk that exceeds its abilities.

The banks in our study report their capital adequacy ratios based on the BASEL II agreement promoted in 2004. This came after the meeting of a number of leading countries in the Bank of International Settlement in Basel (Switzerland). BASEL III accords came after the global financial crisis, however, aren't implemented during the period of our study (Malkoun,2012).

Over the period extending from 2007 till 2012, capital adequacy ratio (CAR) showed a constant decrease with no signs of slight reversal of trend as depicted in chart 10.

Recording its highest level of 0.2194 in 2007, CAR dropped around 18% in 2009 reaching 0.1807. The ratio kept decreasing at a decreasing rate reaching its lowest level in 2012. The rate of decrease was reflected by a flatter slope between each 2 consecutive years indicated in Chart 10. Hence, CAR reported a low 0.1715 in 2012 with a 5% drop from 2009.

Chart 10: Capital Adequacy Ratio



Source: Company Data, **Author's Calculations**

Although the capital adequacy ratio dropped during the transitional phase of the crisis, the drop doesn't highlight a major hit on this ratio whereby on average, the variability of this ratio wasn't huge. Being an indicator of the soundness of banking operations, the slight drop in the ratio indicates that the financial crisis did have a minor effect on the soundness of our sample banks. However, the continuous drop of the capital adequacy ratio isn't a healthy indicator assuming that 2 reasons can underlie the drop. The first is the decrease in adequate capital base which plays an important role in

the growth of the bank's assets and the expansion of its operations aiming to increase profitability. The second is the increase in risk weighted assets which contribute to credit risk discussed previously. These two factors do have negative implications on the performance of banks in general.

Despite the negative trend adopted on average which highlights the response of this ratio to the financial crisis, the 14 banks under study didn't adopt a clear decreasing trend of the capital adequacy ratio individually. They reflected slight positive and negative variations throughout the period.

CHAPTER VI

ECONOMETRIC ANALYSIS

The effects of the macroeconomic and financial indicators in addition to the crisis on the profitability, net loans to deposits, nonperforming to gross loans, and capital adequacy ratios are highlighted in the following regressions. The estimation is done through the common constant and the fixed effects methods with thirteen dummy variables. This aims to capture the effect of the general performance of the economy on the performance indicators of the 14 Islamic banks under study, during the periods before, during, and after the crisis.

A. Net Profit Margin

Tables 3 and 4 reveal the results of the performed regressions. Significant differences could be detected between the 2 panels, whereby none of the explanatory variables turned out to have a significant effect in the fixed effects method. In order to test the hypothesis of homogeneity of constants, an F-statistic is calculated taking the value of 3.187 which is greater than the F-Critical (0.99, 13, 63)= 2.426269. This allows us to reject the null, and give preference to the fixed effects method over the common constant.

Comparing the results of the two models, a difference in the signs of some of the coefficients could be detected between the two methods in addition to the change in significance. While the Real GDP per Capita and the Real GDP Growth Rate per Capita were negative in the common constant method, both were rendered positive and

insignificant. An opposite change of sign took over reserves which became insignificant as well. This allows us to conclude that accounting for the 14 banks as a single unit captures a general image which might not necessarily be true for all the institutions.

Looking at the preferred method, it seems that the macroeconomic and financial indicators do not have a significant effect on the profitability ratio. Moreover, the insignificance of the crisis coefficient doesn't allow us to draw conclusions about the existence of any structural break in 2008. Hence, this tells us that the crisis by itself didn't have a significant common effect on the net profit margin, however, the variability present in the ratio analysis in Chapter V might be driven by other factors that were affected by the crisis and have an effect on the net profit margin.

Table 3: Net Profit Margin-Common Constant Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	187.5896	52.58562	3.567317	0.0006
RGDPCAP	-0.002236	0.000675	-3.310619	0.0014
RGDPGROWTH	-2.332571	2.575928	-0.905526	0.3680
INFLATION	2.632498	1.100071	2.393024	0.0192
UE	-56.57933	9.225089	-6.133201	0.0000
MONEYGROWTH	1.675895	1.339598	1.251043	0.2148
RESERVES	3.28E-10	8.39E-11	3.913687	0.0002
CRISIS	-6.872585	31.85755	-0.215729	0.8298

Source: World Bank Data, Company Data, Author's Calculations

Table 4: Net Profit Margin-Fixed Effects Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	69.59366	128.2600	0.542598	0.5893
RGDPCAP	0.001833	0.002266	0.808819	0.4217
RGDPGROWTH	4.322214	3.399119	1.271569	0.2082
INFLATION	0.171767	1.264610	0.135826	0.8924
UE	-28.64929	30.73582	-0.932114	0.3548
MONEYGROWTH	1.648697	1.424314	1.157538	0.2514
RESERVES	-4.99E-11	1.83E-10	-0.272824	0.7859
CRISIS	6.125029	31.38198	0.195177	0.8459
BANK1	10.92497	94.56814	0.115525	0.9084
BANK2	8.248306	94.56814	0.087221	0.9308
BANK3	-184.2398	170.2175	-1.082379	0.2832
BANK4	-185.2732	170.2175	-1.088449	0.2805
BANK5	-72.55945	105.1135	-0.690296	0.4925
BANK6	-172.5728	105.1135	-1.641775	0.1056
BANK7	89.51220	111.0212	0.806262	0.4231
BANK8	42.77054	111.0212	0.385246	0.7014
BANK9	51.79220	111.0212	0.466507	0.6425
BANK10	-86.20839	59.99114	-1.437019	0.1557
BANK11	21.63165	63.08797	0.342881	0.7328
BANK12	4.569769	48.73649	0.093765	0.9256
BANK13	-292.7230	144.9145	-2.019970	0.0476

Source: World Bank Data, Company Data, Author's Calculations

B. Return on Assets

The effects of the economic indicators and the crisis on the second profitability ratio were depicted in Tables 5 and 6. However, testing for the more convenient method should be done in the first place. The calculated F-Statistic returns a value of 6.71 which is greater than the critical value of F and allows us to reject the null again. This gives preference to the fixed effects method.

Regarding GDP per Capita, there was consistency between the two methods regarding the negative sign and insignificance. However, the real GDP growth per Capita's coefficient changed its sign but remained insignificant, a trend which extended to the global financial crisis as well. Inflation remained positive and insignificant too. Money growth had a consistent positive and significant effect in both cases, indicating that the growth in demand, time, saving, and foreign currency deposits allows the generation of a higher Return on Assets. A one-unit increase in the Money Growth raises the Return on Assets by 0.11 units according to the fixed effects method.

Reserves show a positive effect in both cases, however, its effect was no longer significant in the fixed effects panel. Going with the preferred method allows us to conclude that only Money Growth affects this profitability ratio, whereby changes in the other indicators don't significantly impact any of the components of the Return on Assets.

Again, the crisis represented by another dummy variable didn't impose a direct effect on this return indicator, hinting that the negative effect depicted by the trend in Chapter V goes back to various factors affecting this ratio and are affected by the crisis.

Table 5: Return on Assets- Common Constant Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.115475	0.960922	2.201506	0.0307
RGDPCAP	-1.07E-05	1.23E-05	-0.870292	0.3869
RGDPGROWTH	-0.004357	0.047071	-0.092568	0.9265
INFLATION	0.028033	0.020102	1.394506	0.1672
UE	-0.716182	0.168574	-4.248460	0.0001
MONEYGROWTH	0.083369	0.024479	3.405728	0.0011
RESERVES	5.20E-12	1.53E-12	3.396271	0.0011
CRISIS	-0.116462	0.582148	-0.200055	0.8420

Source: World Bank Data, Company Data, Author's Calculations

Table 6: Return on Assets- Fixed Effects Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.003710	1.954080	-2.048898	0.0446
RGDPCAP	-5.29E-05	3.45E-05	-1.532562	0.1304
RGDPGROWTH	0.094611	0.051787	1.826939	0.0724
INFLATION	0.004090	0.019267	0.212278	0.8326
UE	1.112348	0.468269	2.375445	0.0206
MONEYGROWTH	0.114850	0.021700	5.292649	0.0000
RESERVES	9.66E-13	2.79E-12	0.346488	0.7301
CRISIS	0.862191	0.478114	1.803318	0.0761
BANK1	1.949817	1.440774	1.353313	0.1808
BANK2	1.774817	1.440774	1.231850	0.2226
BANK3	8.657789	2.593314	3.338503	0.0014
BANK4	8.047789	2.593314	3.103283	0.0029
BANK5	4.238355	1.601436	2.646597	0.0103
BANK6	2.768355	1.601436	1.728671	0.0888
BANK7	0.536641	1.691441	0.317268	0.7521
BANK8	-2.855026	1.691441	-1.687925	0.0964
BANK9	-2.403359	1.691441	-1.420894	0.1603
BANK10	-1.847032	0.913983	-2.020861	0.0475
BANK11	1.104306	0.961164	1.148926	0.2549
BANK12	0.170621	0.742515	0.229788	0.8190
BANK13	-6.199544	2.207816	-2.807999	0.0066

Source: World Bank Data, Company Data, Author's Calculations

C. Leverage Multiplier

The choice between the two estimation methods is tested for the leverage multiplier, with an F-statistic of 6.192, the null of constant homogeneity is rejected. This allows us to consider the fixed effects method to be preferred.

Inspecting the results of both approaches, we can retrieve the insignificance of Real GDP growth rate per Capita, inflation, and unemployment in both cases. The effect of Real GDP per Capita though negative in both methods turns insignificant when estimated through the fixed effects.

The effect of money growth on the leverage multiplier is close and significant considering the two methods. Looking at the fixed effects, the growth in money by 1 unit decreases the leverage multiplier by around 0.11 units. This allows us to conclude that the increase in the demand deposits and the time, savings, and foreign currency deposits allows the 14 Islamic banks under study to rely less on debt to finance their assets.

Following the same method, an increase in reserves by 1 unit increases the leverage multiplier minimally by 1.11 x 10^{-11} units allowing us to conclude that the increase in monetary gold holding in addition to reserves held by the IMF and foreign exchange holding controlled by monetary authorities is pushing our sample to rely slightly more on debt to finance their assets.

The impact of the crisis is negative in both cases, however, it's insignificant in the fixed effects method represented in Table 8. Hence, we cannot conclude that the crisis had a significant impact on the leverage multiplier.

Table 7: Leverage Multiplier-Common Constant Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.55090	1.193503	9.678146	0.0000
RGDPCAP	-5.55E-05	1.53E-05	-3.622298	0.0005
RGDPGROWTH	-0.056540	0.058464	-0.967084	0.3366
INFLATION	0.025176	0.024968	1.008356	0.3165
UE	0.035759	0.209376	0.170789	0.8648
MONEYGROWTH	-0.097010	0.030404	-3.190690	0.0021
RESERVES	-3.43E-12	1.90E-12	-1.801843	0.0755
CRISIS	-0.866904	0.723051	-1.198953	0.2343

Source: World Bank Data, Company Data, Author's Calculations

Table 8: Leverage Multiplier- Fixed Effects Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	16.83202	2.483454	6.777665	0.0000
RGDPCAP	-2.32E-05	4.39E-05	-0.527996	0.5994
RGDPGROWTH	-0.110719	0.065816	-1.682250	0.0975
INFLATION	0.036873	0.024486	1.505856	0.1371
UE	-1.001814	0.595127	-1.683362	0.0973
MONEYGROWTH	-0.114251	0.027578	-4.142749	0.0001
RESERVES	1.11E-11	3.54E-12	3.144881	0.0025
CRISIS	-1.197352	0.607638	-1.970501	0.0532
BANK1	-2.287677	1.831090	-1.249353	0.2162
BANK2	-3.167677	1.831090	-1.729941	0.0885
BANK3	-7.154086	3.295862	-2.170627	0.0337
BANK4	-7.455752	3.295862	-2.262155	0.0271
BANK5	-4.970494	2.035277	-2.442171	0.0174
BANK6	-6.188828	2.035277	-3.040780	0.0034
BANK7	-7.986687	2.149665	-3.715317	0.0004
BANK8	-7.890020	2.149665	-3.670349	0.0005
BANK9	-7.083354	2.149665	-3.295097	0.0016
BANK10	-3.713825	1.161587	-3.197198	0.0022
BANK11	-3.176662	1.221550	-2.600517	0.0116
BANK12	-2.933394	0.943668	-3.108503	0.0028
BANK13	1.329856	2.805929	0.473945	0.6372

Source: World Bank Data, Company Data, Author's Calculations

D. Return on Equity

The results of the regressions holding the return on equity as the dependent variable with a common constant and fixed effects method are shown in tables 7 and 8 respectively. Testing the hypothesis, the calculated F-statistic is larger than the critical at 5% significance level allowing us to reject the null and go with the fixed effects method.

Comparing the results of the two methods, all the coefficients of the explanatory variables are insignificant in the fixed effects method denoting that these macroeconomic and financial indicators didn't significantly affect the return on equity. However, the common constant method reveals a significant effect of the Real GDP per Capita which turned out to have a negative effect. Moreover, the effect of unemployment turned out to be negative in both cases, however, significant in the common constant method. This shows that profitability reflected by the return on equity is affected negatively by an increase in the proportion of the labor force unemployed.

However, going with the estimation of the preferred method, the effects of these macroeconomic and financial indicators aren't significant.

The coefficient that appears next to the dummy variable representing the crisis has a negative sign when estimated through the common constant method and a positive sign through the fixed effects. However, in both cases, the coefficient is insignificant rendering the null impact of the crisis on the ratio.

This allows us to conclude that the variability in the return on equity based on the fixed effects method is driven by factors not considered in our study.

Table 9: Return on Equity-Common Constant Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2849.312	770.4982	3.698012	0.0004
RGDPCAP	-0.028542	0.009894	-2.884802	0.0051
RGDPGROWTH	-44.56532	37.74317	-1.180752	0.2414
INFLATION	40.57896	16.11853	2.517535	0.0139
UE	-726.1080	135.1684	-5.371878	0.0000
MONEYGROWTH	38.86882	19.62814	1.980260	0.0513
RESERVES	4.74E-09	1.23E-09	3.854527	0.0002
CRISIS	-293.5468	466.7851	-0.628869	0.5313

Source: World Bank Data, Company Data, Author's Calculations

Table 10: Return on Equity-Fixed Effects Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	69.59366	128.2600	0.542598	0.5893
RGDPCAP	0.001833	0.002266	0.808819	0.4217
RGDPGROWTH	4.322214	3.399119	1.271569	0.2082
INFLATION	0.171767	1.264610	0.135826	0.8924
UE	-28.64929	30.73582	-0.932114	0.3548
MONEYGROWTH	1.648697	1.424314	1.157538	0.2514
RESERVES	-4.99E-11	1.83E-10	-0.272824	0.7859
CRISIS	6.125029	31.38198	0.195177	0.8459
BANK1	10.92497	94.56814	0.115525	0.9084
BANK2	8.248306	94.56814	0.087221	0.9308
BANK3	-184.2398	170.2175	-1.082379	0.2832
BANK4	-185.2732	170.2175	-1.088449	0.2805
BANK5	-72.55945	105.1135	-0.690296	0.4925
BANK6	-172.5728	105.1135	-1.641775	0.1056
BANK7	89.51220	111.0212	0.806262	0.4231
BANK8	42.77054	111.0212	0.385246	0.7014
BANK9	51.79220	111.0212	0.466507	0.6425
BANK10	-86.20839	59.99114	-1.437019	0.1557
BANK11	21.63165	63.08797	0.342881	0.7328
BANK12	4.569769	48.73649	0.093765	0.9256
BANK13	-292.7230	144.9145	-2.019970	0.0476

Source: World Bank Data, Company Data, Author's Calculations

E. Net Loans to Deposits Ratio

The Net Loans to Deposits Ratio is used in Chapter V to assess the liquidity of the 14 Islamic banks studied. Calculating the F-statistic of value 3.99 allows us to reject the null in support of the fixed effects method.

Looking at tables 11 and 12, none of the explanatory variables turns out to have a significant impact on the financial ratio under study except for the reserves under the fixed estimation technique. Reserves have a minimal and slightly significant effect on the net loans to deposits ratio. This tells us that a 1 unit increase in reserves drops the net loans to deposits by 7.16×10^{-11} units. This indicates that the increase in monetary gold holding in addition to reserves held by the IMF and foreign exchange holding controlled by monetary authorities impact the liquidity of the 14 banks positively through reducing this ratio, however, acts against return generating abilities that result from loans.

Hence, the variability of liquidity represented by the net loans to deposits ratio can merely be explained by one financial indicator considered in our study. The crisis again didn't turn out to affect liquidity directly, and the year of the crisis represented by the dummy variable didn't reflect a structural break in the variability of the ratio.

Table 11: Net Loans to Deposits Ratio- Common Constant Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	77.54307	8.343871	9.293417	0.0000
RGDPCAP	0.000148	0.000107	1.377173	0.1725
RGDPGROWTH	0.134042	0.408728	0.327949	0.7439
INFLATION	-0.109057	0.174551	-0.624786	0.5340
UE	0.425549	1.463764	0.290722	0.7721
MONEYGROWTH	0.131091	0.212557	0.616735	0.5393
RESERVES	-1.67E-11	1.33E-11	-1.258538	0.2120
CRISIS	3.238198	5.054905	0.640605	0.5237

Source: World Bank Data, Company Data, Author's Calculations

Table 12: Net Loans to Deposits Ratio-Fixed Effects Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	102.5078	19.39604	5.284985	0.0000
RGDPCAP	5.27E-05	0.000343	0.153720	0.8783
RGDPGROWTH	0.593859	0.514030	1.155301	0.2523
INFLATION	-0.078061	0.191240	-0.408183	0.6845
UE	-8.112034	4.648005	-1.745272	0.0858
MONEYGROWTH	0.096469	0.215391	0.447878	0.6558
RESERVES	-7.16E-11	2.77E-11	-2.587745	0.0120
CRISIS	-1.680360	4.745721	-0.354079	0.7245
BANK1	16.38367	14.30101	1.145631	0.2563
BANK2	21.48367	14.30101	1.502249	0.1380
BANK3	0.843020	25.74104	0.032750	0.9740
BANK4	-32.59198	25.74104	-1.266149	0.2101
BANK5	6.154977	15.89573	0.387209	0.6999
BANK6	17.67831	15.89573	1.112142	0.2703
BANK7	61.40839	16.78912	3.657631	0.0005
BANK8	50.02339	16.78912	2.979513	0.0041
BANK9	41.80839	16.78912	2.490208	0.0154
BANK10	11.35256	9.072122	1.251368	0.2154
BANK11	14.69499	9.540439	1.540285	0.1285
BANK12	5.841600	7.370145	0.792603	0.4310
BANK13	43.00144	21.91461	1.962227	0.0542

Source: World Bank Data, Company Data, Author's Calculations

F. Nonperforming to Gross Loans Ratio

The Nonperforming to Gross Loans Ratio is described in Chapter IV as an indicator of credit quality. The effect of the macroeconomic and financial indicators is estimated in 2 ways similar to the above ratios. Again, the calculated F-statistic which gave a value of 5.55 came in support of rejecting the null and favoring the fixed effects approach.

Tables 13 and 14 indicate the effect of each of the variables under study on the NPL of 14 Islamic banks. Changes in the sign of some coefficients is clear.

Studying the effects under the preferred method allows us to conclude that the macroeconomic indicators in addition to the reserves are rendered insignificant. However, money growth has a negative and significant effect on the NPL ratio. A one unit increase in money growth yields a 0.28 unit drop in NPL, this allows us to conclude that the flow of currency outside banks, increased demand deposits and time, savings, and foreign currency deposits reduces the proportion of the gross loans that is counted as nonperforming. This can be explained by the ability of borrowers to settle their loans in an easier way as money and quasi money grow.

Table 13: Nonperforming to Gross Loans Ratio- Common Constant Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.79104	2.717867	4.338344	0.0000
RGDPCAP	-7.69E-05	3.49E-05	-2.202205	0.0307
RGDPGROWTH	-0.276445	0.133136	-2.076411	0.0412
INFLATION	0.112225	0.056857	1.973813	0.0520
UE	-0.475519	0.476795	-0.997324	0.3218
MONEYGROWTH	-0.175339	0.069237	-2.532457	0.0134
RESERVES	-2.82E-12	4.33E-12	-0.651096	0.5169
CRISIS	-3.147237	1.646545	-1.911419	0.0597

Source: World Bank Data, Company Data, Author's Calculations

Table 14: Nonperforming to Gross Loans Ratio- Fixed Effects Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	18.10208	5.826320	3.106949	0.0028
RGDPCAP	1.01E-05	0.000103	0.098608	0.9218
RGDPGROWTH	-0.072966	0.154408	-0.472556	0.6382
INFLATION	0.054773	0.057446	0.953466	0.3440
UE	-2.393469	1.396201	-1.714273	0.0914
MONEYGROWTH	-0.281593	0.064701	-4.352246	0.0001
RESERVES	-7.44E-12	8.31E-12	-0.894952	0.3742
CRISIS	-3.429791	1.425553	-2.405937	0.0191
BANK1	4.447954	4.295837	1.035410	0.3044
BANK2	3.856288	4.295837	0.897680	0.3728
BANK3	-9.511423	7.732274	-1.230094	0.2232
BANK4	-9.041423	7.732274	-1.169310	0.2467
BANK5	-3.508695	4.774871	-0.734825	0.4652
BANK6	-7.015362	4.774871	-1.469225	0.1467
BANK7	4.943865	5.043233	0.980297	0.3307
BANK8	6.473865	5.043233	1.283674	0.2040
BANK9	6.940532	5.043233	1.376207	0.1736
BANK10	10.91746	2.725148	4.006188	0.0002
BANK11	-1.407822	2.865824	-0.491245	0.6250
BANK12	-4.898974	2.213896	-2.212829	0.0305
BANK13	1.304848	6.582865	0.198219	0.8435

Source: World Bank Data, Company Data, Author's Calculations

G. Capital Adequacy Ratio

The influence of the group of indicators is also studied under the two methods for capital adequacy ratio which in turn revealed significant differences as well. The calculated F-Statistic equal to 3.34 is larger than the critical value opening the door again for rejecting the null and going for the fixed effects method capturing a different effect for each group.

Looking at table 15, we realize that all factors except inflation and dummy representing the global financial crisis had a significant effect on the variability of the

capital adequacy ratio. The results highlighted in table 16 are the ones of the favored method. Real GDP per Capita, inflation, unemployment and the crisis turned out to have insignificant effects on the Capital Adequacy Ratio using data from the 14 Islamic Banks under study and their corresponding countries. However, the Real GDP growth per Capita turned out to have a positive and significant effect (consistent with the result of the common constant method as well).

A one unit increase in Real GDP growth per Capita increased the Capital Adequacy Ratio by 0.57 units. This highlights a positive relationship between the growth of income in these economies and the capital position of banks. Hence, over the periods before, during, and after the crisis growth in GDP triggered a growth in the ratio. The increase in Capital Adequacy Ratio raises the 14 banks' capacity to meet their liabilities and deal with their various risks.

The two financial indicators affected the Capital Adequacy Ratio significantly as well, while the growth in money affected the performance of banks in terms of Capital Adequacy positively, reserves had a minimal negative effect. Technically, an increase in money growth by a unit raises the ratio by 0.33 units while the same increase in reserves drops the ratio by 2.3×10^{-11} units and is slightly significant.

This indicates that the increase in demand deposits and other time, savings, and foreign currency deposits served the capitalization of the banks throughout the period extending from 2007 till 2012 while the increase in reserves locked by monetary authorities slightly reduced the banks' capability in terms of meeting liabilities and reducing credit and other forms of risk.

The crisis again turned out to have an insignificant impact using this econometric approach. Despite the fact that the average Capital Adequacy Ratio represented a negative trend post-crisis as viewed in Chapter V, the presence of the crisis as a unique variable didn't seem to influence the variability of this ratio directly accounting for each bank on its own.

Table 15: Capital Adequacy Ratio- Common Constant Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.197997	2.660026	1.202243	0.2330
RGDPCAP	0.000136	3.42E-05	3.979784	0.0002
RGDPGROWTH	0.624187	0.130302	4.790295	0.0000
INFLATION	-0.131961	0.055647	-2.371408	0.0203
UE	3.369918	0.466648	7.221542	0.0000
MONEYGROWTH	0.289952	0.067763	4.278907	0.0001
RESERVES	-2.18E-11	4.24E-12	-5.149071	0.0000
CRISIS	1.032427	1.611504	0.640661	0.5237

Source: World Bank Data, Company Data, Author's Calculations

Table 16: Capital Adequacy Ratio- Fixed Effects Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.012358	6.425686	1.091301	0.2793
RGDPCAP	-6.35E-05	0.000114	-0.559415	0.5779
RGDPGROWTH	0.571472	0.170292	3.355836	0.0013
INFLATION	-0.055963	0.063356	-0.883320	0.3804
UE	1.937414	1.539831	1.258199	0.2130
MONEYGROWTH	0.338169	0.071357	4.739142	0.0000
RESERVES	-2.37E-11	9.17E-12	-2.589840	0.0119
CRISIS	0.092697	1.572203	0.058960	0.9532
BANK1	4.580862	4.737759	0.966884	0.3373
BANK2	5.549195	4.737759	1.171270	0.2459
BANK3	7.441193	8.527709	0.872590	0.3862
BANK4	11.89119	8.527709	1.394418	0.1681
BANK5	8.602356	5.266072	1.633543	0.1073
BANK6	15.03069	5.266072	2.854251	0.0058
BANK7	9.149602	5.562040	1.645008	0.1049
BANK8	9.779602	5.562040	1.758276	0.0836
BANK9	6.492935	5.562040	1.167366	0.2475
BANK10	3.585853	3.005490	1.193101	0.2373
BANK11	5.657240	3.160637	1.789905	0.0783
BANK12	2.258514	2.441644	0.924997	0.3585
BANK13	16.54733	7.260058	2.279229	0.0261

Source: World Bank Data, Company Data, Author's Calculations

The table below summarizes all the variables that have a significant effect on the seven ratios studied in this chapter under the fixed effects method.

Table 17: Significant Effects of Variables under the Fixed Effects Method

Ratio	Variables with Significant Effect
Net Profit Margin	None
Return on Assets	Positively related to Money Growth
Leverage Multiplier	Negatively related to Money Growth Positively related to Reserves
Return on Equity	None
Net Loans to Deposits	Negatively related to Reserves
Nonperforming to Gross Loans	Negatively related to Money Growth
Capital Adequacy Ratio	Positively related to Real GDP per Capita Growth Positively related to Money Growth Negatively related to Reserves

CHAPTER VII

CONCLUSION

Islamic Banking is one branch of the banking industry that was promoted in 1963. It is centered on compliance with the rules of Sharia' that focus on ensuring justice among individuals, prohibiting any predetermined or guaranteed rate of return, encouraging risk sharing, and cutting down any speculative behavior or investment in prohibited "Haram" industries. Its specific principles and various modes of financing allowed it to gain ample popularity.

The uniqueness of Islamic Banking isn't restricted to its principles only, however, it extends to its financing tools allowing it to have a variety of products to serve its customers' needs, corporate governance which imposes the presence of a Sharia' board, and risk management techniques.

Like any other industry, the realm of Islamic Banking responded to the negative vibes of the Global Financial Crisis. The project considered fourteen banks from this niche that spread over the Arab World in addition to the Far East and Europe.

The variability of the weighted average of the profitability, liquidity, credit quality, and capital adequacy ratios over the period of the crisis allowed us to track the response of this group to the economic downturn.

Our findings show that the average profitability of the 14 Islamic banks fluctuated over the period of the crisis dropping over the periods before and during the turmoil and recovering afterwards for the Net Profit Margin and the Return on Equity. Return on Assets, however, kept a decreasing trend that is not only related to the drop in

net income but to the significant increase in assets as well. The leverage multiplier, on the other hand, carried out a rising trend that highlighted the increase in the group's reliance on debt to finance their assets. This allows us to conclude that on average our sample did have a kind of negative response to the crisis. However, it caught up directly afterwards especially in terms of the return ratios.

The analysis of the liquidity ratios makes it clear that the liquidity of these banks didn't deteriorate hugely over the six year period. Though the Net Cash Position varied, it was trying to maintain variability within a certain band and revert back to a certain level. Another liquidity indicator, the Net Loans to Deposits ratio decreased over the period of the crisis despite the minimal increases it faced between 2009-2010 and 2011-2012. The decrease in this ratio reflected the cushion the banks are trying to have against any liquidity squeeze. Hence, the resilience of these banks in terms of liquidity came in two forms. The first was maintaining a certain portion of the highly liquid cash and the other was the decrease in the amount of deposits caught up in loans, both aiming to maintain the soundness of these institutions' liquidity on average.

In terms of credit quality, the two ratios regarded in our study denoted an overall increasing trend despite the slight drop between 2011 and 2012 for Nonperforming to Gross Loans Ratio and between 2009 and 2010 for Provisions to Gross Loans. The escalation of these ratios started before the crisis peaked in 2008. The continued increase made the link between the weighted averages and the crisis undeniable. Credit risk heightened over the six years while credit quality deteriorated as indicated by the ratios.

The response of the fourteen Islamic Institutions to the crisis was caught from the perspective of capital adequacy as well. The drop in Capital Adequacy Ratio though not overwhelming indicated that the period of the crisis did impose a burden on the soundness and wellbeing of the sample banks on average.

Hence, the banks did have a line of responses to the crisis, however, the resilience of these banks could be viewed in terms of the recovery of the return ratios and their maintenance of a positive value on average in addition to the insurance of balanced levels of liquidity in order to guarantee their stability.

Along with the study of the variations of the weighted averages, the relationship between the macroeconomic and financial indicators of the countries the banks belong to and seven of the ratios was studied through a number of regression run under the common constant and the fixed effect method.

The fixed effects approach turned out to be preferred throughout our study, it showed an insignificant effect of the macroeconomic indicators on the profitability, net loans to deposits, and non performing to gross loans ratios. This allows us to realize that indicators other than the Real GDP per Capita, Real GDP growth per Capita, Inflation, and Unemployment that aren't included in our study might trigger the variability in these ratios. However, growth in Real GDP per Capita was the only macroeconomic factor that affected the Capital Adequacy ratio. This positive relationship between the growth in the economy and the banks' wellbeing, soundness, and their ability to neutralize risks and balance growth is probably how the effect that is observed in the time series trends is explained.

The financial indicators turned out to play a more significant role in the variability of five of these ratios. Money growth had a positive impact on the Return on Assets and Capital Adequacy Ratios indicating that an increase in this financial factor serves the institutions by raising the ratio that signifies its efficiency in translating its assets into return and another that highlights the strength of its capital base respectively. The financial indicator had a negative impact on the leverage multiplier and the nonperforming to gross loans ratio. Reserves on the other hand had a positive effect on the leverage multiplier, yet their influence was negative on the Net Loans to Deposits Ratio and the Capital Adequacy Ratio. This allows us to conclude that under the fixed effects approach preferred in our study, financial indicators took the lead in affecting the performance indicators of the sample of Islamic Banks we studied.

The coefficient on the dummy variable for the years of the crisis in the regressions was insignificant. Although this regards the impact of the crisis which seemed to have an effect on the variability of the weighted average ratios, the distinction can go back to a number of reasons.

The first reason can refer to the fact that the regressions took into consideration the impact of the specific indicators of each country on the ratios of the banks that belong to it. Referring to reports by the literature that discuss the difference in the strength of the impact the crisis had between countries, we came to realize that the regressions might not have accurately reflected the impact of the crisis. Moreover, countries like Bahrain were struck by a political conflict that had negative impulses on its economy.

Another reason might promote the existence of an indirect relationship between the crisis and the variability of these ratios. This can go back to the presence of factors that affect these ratios and are affected by the crisis including some of the variables we include in our regressions.

Another explanation takes into consideration banks that didn't follow a trend similar to that of the weighted average trend. At the time when the average of each ratio showed a certain response to the crisis, either through recovery, maintenance, or even an illustration of its negative impact, some of the banks had their unique individual trends and didn't vary accordingly.

Finally, the implications of our findings can be utilized to serve two groups. Primarily, a group of similar conventional banks (in terms of size and belonging to the same countries) could use strategies adopted by our sample that allowed it to recover in terms of its return ratios and maintain positive profitability levels on average despite the economic turmoil. Moreover, this group of conventional banks that has the same representative conditions could benefit from some of the restrictions and policies these Islamic banks impose on their investments in order to ensure a good level of liquidity.

On the other hand, some of the Islamic banks in our sample that suffered from negative profitability over the period of the crisis could take into consideration the plan of action followed by other banks in the sample that despite the drop their profitability ratios encountered maintained a positive returns position.

The wellbeing of the 14 Islamic banks in our study should be inspiring to conventional banks of the same size. Risk management techniques that focus on

ensuring transparency and stepping away from any instrument that involves uncertainty are believed to take part in promoting Islamic banks as safe harbors (OSullivan, 2008).

Fairness and equity adopted by these banks split the burden of the risk between the lenders and borrowers and doesn't leave one of the parties suffering alone.

Considering risk management, conventional financial markets concentrated more on maximizing investors' returns rather than risk. Conventional banks of similar size should adopt higher transparency and increased restrictive measures in order to control the uncertainty of their financial innovations that were used as collaterals and increased risk in the market (OSullivan, 2008).

In terms of leverage, Islamic banks show more prudence in terms of asset leverage for capital investment while a similar sized group of ten conventional banks promoted a leverage multiplier between 8 and 10, the multiplier of Islamic banks didn't exceed 8 during the worst times of the crisis. The group of Islamic banks performed better in terms of ROA and ROE as well. Whereby the conventional ROE fluctuated between 8.8% and 13.9%, the lowest level Islamic banks recorded was 9.77% having an upper bound of 15.55% between 2008 and 2011 (Malkoun, 2012).

The strict rules Islamic banks impose on investment did earn them a leading position in terms of liquidity ratios compared to a similar group of conventional banks. While the Net Cash Position ranged between 4.5% and 10%, Islamic banks in our study didn't go below 11.5%. Better liquidity performance was highlighted through the Net Loans to Deposits ratio as well which reached 100% for conventional banks and dropped between 2008 and 2011 to reach 94% while Islamic bank didn't exceed 88% and went to a low 81% (Malkoun, 2012).

Credit ratios however indicate that restrictions on investments do have some drawbacks on Islamic banking whereby the Nonperforming loans and provisions to gross loans ratios showed better credit quality for conventional banks. This can be due to the inability of our sample of banks to used sophisticated tools that can serve risk management.

Thus, the response of our sample banks to the crisis could provide good lessons to other banks within the sample and external to it as well.

APPENDIX I

BANKS' FINANCIAL RATIOS

Table 18: Al Rajhi Bank's Ratios

	NPM	ROA	LM	ROE	NCP	NLD	NPL	Prov. to GL	CAR
2007	69.19%	5.6%	5.29	29.5%	5.48%	116%	2.88%	0.41%	24.4%
2008	61.7%	4.51%	6.04	25.77%	3.95%	92 %	1.21%	0.86%	21.39%
2009	58.8%	4.05%	5.94	24.27%	10.42%	91.28%	3.32%	1.51%	19.3%
2010	58.06%	3.81%	6.09	22.93%	10.94%	83.92%	2.15%	1.54%	20.63%
2011	59.01%	3.64%	6.59	23.1%	8.43%	78.94%	1.66%	1.14%	20.03%
2012	56.38%	3.23%	7.33	22.54%	9.84%	77.68%	2%	1.31%	19.83%

Source: Company Data, Author's Calculations

Table 19: Kuwait Finance House's Ratios

	NPM	ROA	LM	ROE	NCP	NLD	NPL	Prov. to GL	CAR
2007	33.11%	3.12%	6.25	19.57%	9.71%	94.29%	3.77%	0.42%	23%
2008	17.73%	1.48%	6.61	10.95%	12.97%	92.14%	5.88%	3%	22%
2009	15.5%	1.05%	9.09	4.56%	11%	87.41%	6.74%	1.75%	15.21%
2010	14.4%	0.8%	9.72	8.2%	12.06%	93.38%	8.05%	1.88%	14.22%
2011	9.17%	0.6%	8.64	6.2%	10.16%	82.67%	8.52%	2.7%	13.73%
2012	9.40%	0.6%	8.96	6.6%	6.75%	83.45%	7.16%	2.6%	13.93%

Source: Company Data, Author's Calculations

Table 20: Dubai Islamic Bank's Ratios

	NPM	ROA	LM	ROE	NCP	NLD	NPL	Prov. to GL	CAR
2007	41.61%	2.54%	8.04	19.3%	26.53%	62.14%	2.7%	1.04%	12.7%
2008	30.21%	1.84%	9.52	16%	11.53%	79.4%	5.5%	1.24%	10.7%
2009	23.68%	1.43%	9.39	13.6%	16.7%	77.8%	8.6%	1.99%	17.5%
2010	12%	0.62%	9.41	8.7%	11.63%	90.1%	12.2%	1.43%	17.8%
2011	21.02%	1.15%	9.91	11.2%	10.45%	85%	13.9%	1.8%	18.2%
2012	22.90%	1.26%	9.94	13%	10.92%	88.7%	12.9%	1.65%	17.4%

Source: Company Data, Author's Calculations

Table 21: Abu Dhabi Islamic Bank's Ratios

	NPM	ROA	LM	ROE	NCP	NLD	NPL	Prov. to GL	CAR
2007	26%	1.75%	8.13	18.8%	18.03%	82%	3.34%	0.32%	16.7%
2008	28%	1.66%	9.08	15.4%	13.11%	91%	3.9%	3.9%	11.6%
2009	2.3%	0.12%	8.97	1.5%	16.62%	84%	10.29%	10.29%	17%
2010	24.85%	1.36%	9.28	18.2%	21.2%	84.84%	11.4%	11.4%	16%
2011	26.78%	1.5%	8.67	18.2%	15.32%	88.4%	12.26%	12.26%	17.4%
2012	27.43%	1.4%	6.8	18.7%	20.61%	83.5%	11.06%	11.06%	21.4%

Source: Company Data, Author's Calculations

Table 22: HSBC Amanah's Ratios

	NPM	ROA	LM	ROE	NCP	NLD	NPL	Prov. to GL	CAR
2007	22.87%	1.53%	15.42	23.59%	23.51%	63.81%	0.83%	0.85%	18.8%
2008	18.48%	0.46%	7.29	3.32%	20.24%	70%	0.9%	0.49%	21.2%
2009	20.86%	1.2%	6.47	7.7%	14.34%	79.45%	1.7%	1.7%	22%
2010	13.75%	0.66%	8.6	5.66%	22.34%	79.83%	1.49%	1.49%	17.5%
2011	22.67%	0.97%	11.58	11.18%	14.71%	82.79%	1.56%	1.2%	11.3%
2012	21.56%	1.09%	11.68	12.81%	13.58%	81.57%	1.47%	1.61%	11.8%

Source: Company Data, Author's Calculations

Table 23: Al Baraka Banking Group's Ratios

	NPM	ROA	LM	ROE	NCP	NLD	NPL	Prov. to GL	CAR
2007	45.27%	2.3%	6.43	14%	17.19%	91.4%	5.55%	0.21%	27.27%
2008	34.3%	1.9%	7.04	13%	15.89%	91.16%	4.64%	0.46%	22.79%
2009	26.34%	1.4%	7.57	10%	19.36%	85.74%	5.55%	1.2%	22.83%
2010	29.28%	1.3%	8.73	11%	18.82%	83.93%	5.28%	0.58%	19.69%
2011	28.61%	1.3%	9.53	12%	17.47%	80.5%	4.86%	0.34%	19.69%
2012	26.7%	1.3%	9.68	13%	10.23%	87.32%	4.3%	0.7%	18.47%

Source: Company Data, Author's Calculations

Table 24: Qatar Islamic Bank's Ratios

	NPM	ROA	LM	ROE	NCP	NLD	NPL	Prov. to GL	CAR
2007	74%	6.9%	4.61	31.2%	18.99%	95.7%	2.15%	0.13%	20%
2008	64.29%	6%	4.7	27.9%	17%	113.7%	1.39%	0.53%	17.04%
2009	54.81%	3.6%	4.36	16.4%	22.69%	111.3%	1.1%	0.12%	17.33%
2010	55.35%	2.8%	5.73	14%	24.92%	97%	1.3%	0.15%	17.37%
2011	50.89%	2.5%	5.2	13.5%	13.4%	106.3%	1.1%	0.57%	18.58%
2012	39.96%	1.9%	5.6	10.9%	13.99%	100%	1.6%	1.03%	15.4%

Source: Company Data, Author's Calculations

Table 25: Bank al Jazira's Ratios

	NPM	ROA	LM	ROE	NCP	NLD	NPL	Prov. to GL	CAR
2007	55.65%	4.3%	4.59	18.1%	18.04%	63.13%	2%	0.25%	23.2%
2008	20%	0.9%	5.93	4.8%	14.08%	72.41%	1.5%	0.8%	19.92%
2009	2.39%	0.09%	6.68	0.62%	13.33%	70.02%	7.46%	2.5%	17.73%
2010	2.51%	0.09%	7.13	0.64%	14.85%	68.4%	6.71%	1.82%	15.72%
2011	25%	0.84%	8.21	6.55%	15.35%	74.8%	4.2%	0.28%	17.4%
2012	31.27%	0.98%	10.16	9.98%	13.96%	73.5%	3.33%	0.56%	15.67%

Source: Company Data, Author's Calculations

Table 26: Bank al Bilad's Ratios

	NPM	ROA	LM	ROE	NCP	NLD	NPL	Prov. to GL	CAR
2007	9.3%	0.43%	5.35	2.33%	44.22%	107%	1.65%	1.04 %	32.5%
2008	14.07%	0.7%	5	3.89%	20.74%	75%	1.21%	0.23%	24.2%
2009	-27.28%	-1.4%	5.79	-8.26%	14.9%	80.27%	5.51%	2.65%	18.4%
2010	8.37%	0.43%	6.8	2.96%	18.19%	72.58%	5.47%	1.87%	17.4%
2011	24%	1.19%	8.11	9.66%	32.48%	59.81%	4.67%	1.7%	18.3%
2012	54.23%	3.16%	6.81	21.55%	17.05%	76.89%	3.89%	1.42%	18.5%

Source: Company Data, Author's Calculations

Table 27: Qatar International Islamic Bank's Ratios

	NPM	ROA	LM	ROE	NCP	NLD	NPL	Prov. to GL	CAR
2007	59.55%	4.82%	4.22	20.36%	39%	60.34%	2.1%	0.52%	25.07%
2008	53.72%	3.9%	4.62	18.02%	17.89%	90.05%	1.4%	0.98%	20.11%
2009	53.37%	3.09%	4.35	13.45%	24.5%	78%	1.7%	0.15%	19.83%
2010	51.48%	3.07%	4.76	14.63%	30.14%	65%	3.1%	0.49%	23.99%
2011	57.6%	2.79%	4.77	13.34%	16.91%	71%	1.6%	0.19%	24.76%
2012	57.38%	2.37%	5.67	13.48%	20.08%	59%	1.56%	0.16%	18.66%

Source: Company Data, Author's Calculations

Table 28: RHB Islamic Bank's Ratios

	NPM	ROA	LM	ROE	NCP	NLD	NPL	Prov. to GL	CAR
2007	27.29%	1.97%	11.36	23.31%	9.5%	62.46%	6.03%	1.21%	17.9%
2008	20.35%	1.29%	11.1	14.46%	2.57%	65.03%	4.82%	0.62%	13.5%
2009	14.79%	0.84%	12.51	9.96%	8.2%	58.66%	6.19%	1.36%	13.8%
2010	15.78%	0.75%	13.91	9.64%	22.86%	87.6%	6.95%	0.75%	13.4%
2011	19.03%	0.67%	16.88	11.39%	24.78%	61.17%	4.29%	1.52%	13.9%
2012	14.52%	0.65%	15.12	10.3%	11.25%	73.1%	2.51%	1.24%	14.7%

Source: Company Data, Author's Calculations

Table 29: Boubyan Bank's Ratios

	NPM	ROA	LM	ROE	NCP	NLD	NPL	Prov. to GL	CAR
2007	34.18%	2.48%	5.43	13.53%	6.57%	164.2%	1.43%	0.14%	28.4%
2008	3.09%	0.21%	6.21	1.36%	8.09%	92.81%	2.38%	3.31%	21.4%
2009	-588%	-5.4%	11.05	-59.3%	5.35%	81.32%	11.71%	2.29%	13.8%
2010	15.09%	0.46%	5.51	2.56%	3.08%	87.62%	0.88%	1.59%	27.6%
2011	17.46%	0.51%	6.33	3.28%	12.4%	85.66%	0.77%	1.48%	25.1%
2012	17.83%	0.53%	7.43	3.96%	8.99%	90.91%	1.91%	1.56%	24.4%

Source: Company Data, Author's Calculations

Table 30: Bahrain Islamic Bank's Ratios

	NPM	ROA	LM	ROE	NCP	NLD	NPL	Prov. to GL	CAR
2007	67.6%	4.57%	3.52	19.1%	0.9%	93%	0.6%	0%	39.18%
2008	40.1%	2.91%	5.25	12.62%	2.1%	83%	0.5%	1.51%	29.29%
2009	-81.2%	-2.71%	6.49	-12.6%	1.4%	98%	8.7%	3.41%	13.74%
2010	-228%	-4.3%	9.35	-33.0%	2%	97%	25.8%	1.75%	14.1%
2011	-66.24%	-1.96%	8.28	-17.2%	19%	65%	32.5%	3.55%	13.58%
2012	-148%	-4.33%	11.93	-42.3%	14%	65%	28%	3.99%	12.31%

Source: Company Data, Author's Calculations

Table 31: Islamic Bank of Britain's Ratios

	NPM	ROA	LM	ROE	NCP	NLD	NPL	Prov. to GL	CAR
2007	-147%	-4.2%	6.64	-27.9%	3.43%	110.42%	0.7%	0.42%	48%
2008	-120%	-3.3%	9.54	-31.2%	1.44%	100.75%	0.7%	0.2%	32%
2009	-592%	-4.6%	12.31	-56.5%	1.81%	85.98%	0.5%	0.25%	28%
2010	-493%	-3.8%	8.32	-31%	3.42%	86.2%	0.5%	0.1%	43%
2011	-425%	-4.1%	12.7	-52.7%	2.2%	73.81%	0.8%	0.03%	25%
2012	-291%	-2.7%	13	-34.8%	0.93%	54.85%	0.5%	0.04%	28%

Source: Company Data, Author's Calculations

REFERENCES

Abdul Gafoor, A.L.M. *Islamic Banking* . AS Noordeen, 1995. Web. <http://users.bart.nl/~abdul/chap4.html>.

Abdullayeva, Leyla. "Azerbaijan develops Islamic financing." *Trend News Agency*. (2012). Web. 4 Apr. 2014. <http://en.trend.az/capital/analytical/1984137.html>.

Abdulle, Mohamed Yusuf and Kassim, Salina. *Impact of Global Financial Crisis on the Performance of Islamic and Conventional Banks: Empirical Evidence from Malaysia*. 2012. Web. 5 Mar 2014.

Ahmed, Habib and Chapra, M.Umer . *Corporate Governance in Islamic Financial Institutions.* 2002. Web. 5 Mar 2014.

Al Masri, Rafic. *The Binding Unilateral Promise (wa'd) in Islamic Banking Operations: Is it Permissible for a Unilateral Promise (wa'd) to be Binding as an Alternative to a Proscribed Contract.* 2002. Web. 5 Mar 2014.

Amba, Muni Sekhar and Almukharreq, Fayza. *Impact of the Financial Crisis on Profitability of the Islamic Banks vs Conventional Banks- Evidence from GCC*. 2013. Web. 5 Mar 2014.

"About IDB." *Islamic Development Bank*. N.p., n.d. Web. 3 Apr 2014.

Abu Dhabi Islamic Bank. *2007 Annual Report.* (2008). 02 Apr. 2014.

Abu Dhabi Islamic Bank. *2008 Annual Report.* (2009). 02 Apr. 2014.

Abu Dhabi Islamic Bank. *2009 Annual Report.* (2010). 02 Apr. 2014.

Abu Dhabi Islamic Bank. *2010 Annual Report.* (2011). 02 Apr. 2014.

Abu Dhabi Islamic Bank. *2011 Annual Report.* (2012). 02 Apr. 2014.

Abu Dhabi Islamic Bank. *2012 Annual Report.* (2013). 02 Apr. 2014.

Abu Ghuddah, Abdul Sattar. *Islamic Finance Qualifications (IFQ): The Official Workbook*. Beirut: Securities and Investment Institute, 2007. Web.

Al-Amine, Muhammad, and Muhammad Al-Bashir. *Global Suk?k and Islamic Securitization Market: Financial Engineering and Product Innovation*. Leiden: Koninklijke Brill NV, 2012. Web.

Al Rajhi Bank. *2007 Annual Report.* (2008). 02 Apr. 2014.

Al Rajhi Bank. *2008 Annual Report.* (2009). 02 Apr. 2014.

Al Rajhi Bank. *2009 Annual Report.* (2010). 02 Apr. 2014.

Al Rajhi Bank. *2010 Annual Report.* (2011). 02 Apr. 2014.

Al Rajhi Bank. *2011 Annual Report.* (2010). 02 Apr. 2014.

Al Rajhi Bank. *2012Annual Report.* (2013). 02 Apr. 2014.

AlBaraka Banking Group. *2007 Annual Report.* (2008). 02 Apr. 2014.

AlBaraka Banking Group. *2008Annual Report.* (2009). 02 Apr. 2014.

AlBaraka Banking Group. *2009 Annual Report.* (2010). 02 Apr. 2014.

AlBaraka Banking Group. *2010 Annual Report.* (2011). 02 Apr. 2014.

AlBaraka Banking Group. *2011 Annual Report.* (2012). 02 Apr. 2014.

AlBaraka Banking Group. *2012 Annual Report.* (2013). 02 Apr. 2014.

Ariff, Mohamed. "Islamic Banking." *Islamicity*. N.p., n.d. Web. 4 Apr 2014. <http://www.islamicity.com/finance/IslamicBanking_Evolution.htm>.

Bahrain Islamic Bank. *2007 Annual Report.* (2008). 02 Apr. 2014.

Bahrain Islamic Bank. *2008 Annual Report.* (2009). 02 Apr. 2014.

Bahrain Islamic Bank. *2009 Annual Report.* (2010). 02 Apr. 2014.

Bahrain Islamic Bank. *2010 Annual Report.* (2011). 02 Apr. 2014.

Bahrain Islamic Bank. *2011 Annual Report.* (2012). 02 Apr. 2014.

Bahrain Islamic Bank. *2012 Annual Report.* (2013). 02 Apr. 2014.

Baloch, Muhammad Zeeshan. "Importance of Contract in Islam and its Legal Importance ." Institute of Southern Punjab Multan. Multan. 11 Jun 2012. Lecture.

Bank Albilad. *2007 Annual Report.* (2008). 02 Apr. 2014.

Bank Albilad. *2008 Annual Report.* (2009). 02 Apr. 2014.

Bank Albilad. *2009 Annual Report.* (2010). 02 Apr. 2014.

Bank Albilad. *2010 Annual Report.* (2011). 02 Apr. 2014.

Bank Albilad. *2011 Annual Report.* (2012). 02 Apr. 2014.

Bank Albilad. *2012 Annual Report.* (2013). 02 Apr. 2014.

Bank Aljazira. *2007 Annual Report.* (2008). 02 Apr. 2014.

Bank Aljazira. *2008 Annual Report.* (2009). 02 Apr. 2014.

Bank Aljazira. *2009 Annual Report.* (2010). 02 Apr. 2014.

Bank Aljazira. *2010 Annual Report.* (2011). 02 Apr. 2014.

Bank Aljazira. *2011 Annual Report.* (2012). 02 Apr. 2014.

Bank Aljazira. *2012 Annual Report.* (2013). 02 Apr. 2014.

Bloem, Adrian and Freeman, Russel. IMF. *The Treatment of Nonperforming Loans*. 2011. Web. 02 Apr 2014.

Bloomberg L.P. Stock Data. Bloomberg terminal. Web. 04 Apr. 2014.

Boubyan Bank. *2007 Annual Report.* (2008). 02 Apr. 2014.

Boubyan Bank. *2008 Annual Report.* (2009). 02 Apr. 2014.

Boubyan Bank. *2009 Annual Report.* (2010). 02 Apr. 2014.

Boubyan Bank. *2010 Annual Report.* (2011). 02 Apr. 2014.

Boubyan Bank. *2011 Annual Report.* (2012). 02 Apr. 2014.

Boubyan Bank. *2012 Annual Report.* (2013). 02 Apr. 2014.

"Capital Adequacy Requirements For Sukuk, Securitizations And Real Estate Investment." . Islamic Financial Services Board, n.d. Web. 4 Apr 2014.

"Capital Risk Definition." *Investopedia.com*. Web. 20 Mar. 2014. <http://www.investopedia.com/terms/c/capitalrisk.asp>.

"Central Banks." . Financial Islam-Islamic Finance, n.d. Web. 1 May. 2014. <http://www.financialislam.com/relationship-with-central-banks.html>.

Chudik, Alexander & Fratzscher, Marcel. 2012. "Liquidity, Risk and the Global Transmission of the 2007-08 Financial Crisis and the 2010-11 Sovereign Debt Crisis,"CEPR Discussion Papers 8787, C.E.P.R. Discussion Papers. Web. 4 Apr 2014

"Concepts of Islamic Economics and Finance: Mudarabah." *WordPress*. N.p., 02 Apr 2006. Web. 4 Apr 2014. <http://cief.wordpress.com/2006/04/02/mudarabah/>.

"Credit Risk Definition." *Investopedia.com*. Web. 20 Mar. 2014. <http://www.investopedia.com/terms/c/creditrisk.asp>.

"Definition of Sukuk." *Lexicon.ft.com*. Web. 20 Mar. 2014. <http://lexicon.ft.com/Term?term=sukuk-(Islamic-bonds)>.

Dubai Islamic Bank. *2007 Annual Report.* (2008). 02 Apr. 2014.

Dubai Islamic Bank. *2008 Annual Report.* (2009). 02 Apr. 2014.

Dubai Islamic Bank. *2009 Annual Report.* (2010). 02 Apr. 2014.

Dubai Islamic Bank. *2010 Annual Report.* (2011). 02 Apr. 2014.

Dubai Islamic Bank. *2011 Annual Report.* (2012). 02 Apr. 2014.

Dubai Islamic Bank. *2012 Annual Report.* (2013). 02 Apr. 2014.

Elliott, Larry. "Global financial crisis: five key stages 2007-2011." *Guardian*. 07 Aug 2011. Web.

Elmeskov, Jorgen. OECD. *The General Economic Background to the Crisis*. 2009. Web. 5 Mar 2014.

Grier, Waymond. *Credit Analysis of Financial Institutions*. 2nd. London: Euromoney Institutional Investor Plc, 2007. Web.

Gulf Base. Company Data. 04 Apr 2014.

Hassan, M. Kabir and Kayed, Rasem. *The Global Financial Crisis and Islamic Finance*. 2009. Web. 5 Mar 2014.

Hassan, M. Kabir, and Mervyn Lewis. *Handbook of Islamic Banking*. Cheltenham: Edward Elgar Publishing Limited, 2007. Web. 3 May 2014.

Hennessey, Keith, Douglas Holtz Eaki, and Bill Thomas. "What Caused the Financial Crisis: Congress's inquiry commission is offering a simplistic narrative that could lead to the wrong policy reforms.." *Wall Street Journal*. (2011). Web. 4 Apr. 2014.

Hinlsenrath, Jon, Serena Ng, and Damian Paletta. "Worst Crisis Since ." *Wall Street Journal*. (2008). Web. 3 Apr. 2014.

"History of Islamic Banking." . N.p.. Web. 3 Apr. 2014. <http://homepages.uwp.edu/alhaj001/History of Islamic Banking.html>.

HSBC Amanah (Malaysia). *2007 Annual Report.* (2008). 02 Apr. 2014.

HSBC Amanah (Malaysia). *2008 Annual Report.* (2009). 02 Apr. 2014.

HSBC Amanah (Malaysia). *2009 Annual Report.* (2010). 02 Apr. 2014.

HSBC Amanah (Malaysia). *2010 Annual Report.* (2011). 02 Apr. 2014.

HSBC Amanah (Malaysia). *2011 Annual Report.* (2012). 02 Apr. 2014.

HSBC Amanah (Malaysia). *2012 Annual Report.* (2013). 02 Apr. 2014.

"Interest (Riba`) ." . N.p., n.d. Web. 3 Apr 2014. <http://www.inter-islam.org/Prohibitions/intrst.htm>.

"Introduction to Islamic Banking." *Islamic Banker*. (2010). Web. 3 Apr. 2014.

"Iran, biggest Shariah-compliant market: The Banker." *Payvand Iran News*. Mehr News Agency, 11 Nov 2009. Web. 3 Apr 2014.

"Iran holds 42.7% of total global Islamic banking assets." *Tehran Times*. 17 Mar 2013: n. page. Web. 3 Apr. 2014.

"Iranian Bank Tops Islamic Banking List ." *Global Islamic Finance Magazine*. n.d. Web. 3 Apr. 2014.

<http://www.globalislamicfinancemagazine.com/?com=news_list&nid=327>.

"Islamic Banks: More Resilient to Crisis? ." *IMFSurvey Magazine: IMF Research*. 04 Oct 2010.Web. 03 Apr. 2014.

Islamic Bank of Britain. *2007 Annual Report.* (2008). 02 Apr. 2014.

Islamic Bank of Britain. *2008 Annual Report.* (2009). 02 Apr. 2014.

Islamic Bank of Britain. *2009 Annual Report.* (2010). 02 Apr. 2014.

Islamic Bank of Britain. *2010 Annual Report.* (2011). 02 Apr. 2014.

Islamic Bank of Britain. *2011 Annual Report.* (2012). 02 Apr. 2014.

Islamic Bank of Britain. *2012 Annual Report.* (2013). 02 Apr. 2014.

"Islamic finance Segments." (2012): 15-35. *Global Islamic Finance Industry*. Web. 4 Apr 2014.

Islamic Financial Institutions (Banks and Financial Companies). 4th. Washington DC: International Business Publications, Web.

Jamaldeen, Faleel. *Islamic Finance*. Hoboken: John Wiley & Sons,Inc., 2012. Print.

Jouni, Mohammad. "How are Islamic Banks Operating in Lebanon?." MA thesis. American University of Beirut, 2012. Web.

Kuwait Finance House. *2007 Annual Report.* (2008). 02 Apr. 2014.

Kuwait Finance House. *2008 Annual Report.* (2009). 02 Apr. 2014.

Kuwait Finance House. *2009 Annual Report.* (2010). 02 Apr. 2014.

Kuwait Finance House. *2010 Annual Report.* (2011). 02 Apr. 2014.

Kuwait Finance House. *2011 Annual Report.* (2012). 02 Apr. 2014.

Kuwait Finance House. *2012 Annual Report.* (2013). 02 Apr. 2014.

"Leverage Ratio Definition." *Businessdictionary.com*. Web. 20 Mar. 2014. <http://www.businessdictionary.com/definition/liquidity-risk.html>.

"Liquidity Risk." *Investopedia.com*. Web. 20 Mar. 2014. <http://www.investopedia.com/terms/c/creditrisk.asp>.

Malkoun, Micheal. "A Financial Examination of the Differences Between Islamic and Conventional Banks in the Mena Region Based on their Fundamental Data and Performance in Recent Years." MA thesis. American University of Beirut, 2012. Web.

McSheehy, Will. "Islamic Bond Scholars toughen Rules on Sukuk Sales ." *Bloomberg* 13 Mar. 2008. Web.

Miniaoui, Hela and Gohou, Gaston. *Did The Islamic Banking Perform Better During The Financial Crisis? Evidence from the UAE*. 2011. Web. 5 Mar 2011.

"Most sukuk 'not Islamic', body claims ." *Arabian Business* 22 Nob. 2007. Web.

"Murabaha." *Dib.ae*. Web. 20 Mar. 2014. <*www.dib.ae/corporate-banking/products-and-services/murabaha*>.

"Murabaha." *Albaraka.com*. Web. 20 Mar. 2014. <*http://www.albaraka.com/default.asp?action=category&id=77*>.

"Net Profit Margin." *Financeformulas.net*. Web. 20 Mar. 2014. < http://www.financeformulas.net/Net_Profit_Margin.html>.

"Origin and History of Islamic Banking." *Sailan Muslim*. (2009). Web. 3 Apr. 2014.

OSullivan, Anthony. "Islamic Banking." . OECD Observer. 2008. Web. 1 May 2014.<http://oecdobserver.org/news/archivestory.php/aid/2865/_Islamic_banking_.html>.

"Profitability Ratio Analysis." . N.p.. Web. 4 Apr 2014. <http://www.public.asu.edu/~bac524/profitability_ratios.pdf>.

"Profitability Ratios Definition." *Investopedia.com*. Web. 20 Mar. 2014. <http://www.investopedia.com/terms/p/profitabilityratios.asp>.

"Profit and Loss Sharing." *Islamic Banking*. Institute of Islamic Banking and Insurance. Web. 3 Apr 2014. <http://www.islamic-banking.com/profit_and_lose_sharing.asp&xgt;.

"Profit Margin Analysis." . The American Association of Individual Investors. Web. 4 Apr 2014. <http://www.aaii.com/computerizedinvesting/article/profit-margin-analysis.mobile>.

"Profit Margin Definition." *Investopedia.com*. Web. 20 Mar. 2014. <http://www.investopedia.com/terms/p/profitmargin.asp>.

Qatar Islamic Bank. 2007 Annual Report. (2008). 02 Apr. 2014.

Qatar Islamic Bank. 2008 Annual Report. (2009). 02 Apr. 2014.

Qatar Islamic Bank. 2009 Annual Report. (2010). 02 Apr. 2014.

Qatar Islamic Bank. 2010 Annual Report. (2011). 02 Apr. 2014.

Qatar Islamic Bank. 2011 Annual Report. (2012). 02 Apr. 2014.

Qatar Islamic Bank. 2012 Annual Report. (2013). 02 Apr. 2014.

Qatar International Islamic Bank. 2007 Annual Report. (2008). 02 Apr. 2014.

Qatar International Islamic Bank. 2008 Annual Report. (2009). 02 Apr. 2014.

Qatar International Islamic Bank. 2009 Annual Report. (2010). 02 Apr. 2014.

Qatar International Islamic Bank. 2010 Annual Report. (2011). 02 Apr. 2014.

Qatar International Islamic Bank. 2011 Annual Report. (2012). 02 Apr. 2014.

Qatar International Islamic Bank. 2012 Annual Report. (2013). 02 Apr. 2014.

RHB Islamic Bank. *2007 Annual Report.* (2008). 02 Apr. 2014.

RHB Islamic Bank. *2008 Annual Report.* (2009). 02 Apr. 2014.

RHB Islamic Bank. *2009 Annual Report.* (2010). 02 Apr. 2014.

RHB Islamic Bank. *2010 Annual Report.* (2011). 02 Apr. 2014.

RHB Islamic Bank. *2011 Annual Report.* (2012). 02 Apr. 2014.

RHB Islamic Bank. *2012 Annual Report.* (2013). 02 Apr. 2014.

"Riba Al-Fadhl." *Investment-and-Finance.net*. Web. 20 Mar. 2014. <http://www.investment-and-finance.net/islamic-finance/r/riba-al-fadhl.html>.

Smolo, Edib. "New Sukuk guidelines by Securities Commission Malaysia: An overview." *Islamic Finance News*. 25 Jan 2012. Web. 4 Apr. 2014.

"Sukuk Definition." *Investopedia.com*. Web. 20 Mar. 2014. <http://www.investopedia.com/terms/s/sukuk.asp>.

"The Evils of Gambling ." . N.p., n.d. Web. 3 Apr 2014. <http://www.inter-islam.org/Prohibitions/gambling.html>.

"The Fitch Universal Format on BankScope." (2009): n.pag. *Fitch Ratings*. Web. 4 Apr 2014. <http://www.bvd.co.uk/bankscope/bankscope.pdf>.

"The Origins of the Financial Crisis: Crash Course." *Economist*. 07 Sep 2013: n. page. Web. 3 Apr 2014.

"The Role of the Shariah Advisory Board in Islamic Finance." *Qfinance.com*. Web. 20 Mar. 2014. < http://www.qfinance.com/capital-markets-checklists/the-role-of-the-shariah-advisory-board-in-islamic-finance>.

Thijs, Jereon. "Risk Management in Islamic Banking." Bank Islam Malaysia Berhad. Lecture.

Thomson, Lisa Mary. "What is Corporate Governance?." *Economic Times*. 18 01 2009. Web. 4 Apr. 2014.

"Understanding Musharakah." *Deloitte.com*. Web. 20 Mar. 2014. <http://www.deloitte.com/view/en_XD/xd/glossary/understandingmusharakah>.

Venardos, Angelo. *Islamic Banking and Finance in Southeast Asia*. 3rd. Singapore: World Scientific Publishing, 2012. Web.

Venardos, Angelo . *Socioeconomics Response in Southeast Asia*. 2010. Web. 5 Mar 2014.

"What is Sukuk." *Isdb.org*. Web. 20 Mar. 2014. <http://thatswhy.isdb.org/irj/go/km/docs/documents/IDBDevelopments/Internet/thatswhy/en/sukuk/what-is-sukuk.html>.

Wilson, Rodney. *Islamic Economics and Finance*. 2008. Web. 5 Mar 2014.

World Bank Database. Macroeconomic Indicators. 04 Apr 2014.