Islamic Banking and Financial Stability-- An Empirical Evidence from Gulf Region

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Abstract

Islamic banking and finance is one of the fastest growing sectors of the global banking industry and has risen to prominence recently through its distinctive characteristics. The emergence of Islamic finance can be traced back to 1963 in Egypt, while its importance comes to the global financial system only after the global financial crisis occurred in 2008. Many earlier studies have discussed theoretically the relevance of Islamic finance principles and instruments in enhancing financial stability and economic growth under different financial situations. Moreover, financial stability is an essential tool for economic growth, as most transactions in the real economy are made through the financial system. However, few studies have empirically examined the relationship between Islamic banking and financial stability. To fill this gap in empirical literature, this study explores empirically the relationship between the development of Islamic finance system and financial stability. Four countries of the most important countries for Islamic finance growth from Gulf Co-operative Council (GCC), namely, United Arab Emirates (UAE), Qatar, Kingdom of Saudi Arabia (KSA), and Bahrain are selected for the study. To document the relationship between development of Islamic finance and financial stability, time series data from 2005 to 2010 for all fledged-Islamic banks working in the four countries are used. Firstly, the trend analysis method is utilized where yearly financial ratios of Islamic banking sector are computed using Microsoft Excel. For the analysis, liquidity ratios and capital adequacy ratios are determined. Secondly, One Way Analysis of Variance (ANOVA) is used to test the hypotheses using SPSS. Our empirical results show that Islamic banking sector is stable in terms of, capital adequacy and liquidity in the period under study for the selected countries. Furthermore, Islamic finance shows its stability under various financial crises and shocks. Also, the findings of research will be of interest to western and Islamic finance practitioners, policy makers and academicians, who are interested in the stability of Islamic finance system.

JEL classification: G01, G20, G21

Key words: Islamic banking, Financial stability, GCC, Financial crisis

Introduction

Islamic finance is based on ethical principles in line with Islamic religious law. Despite its low share of the global financial market, Islamic finance has been one of the fastest growing sectors over the last decades and has gained further momentum in the wake of the financial crisis. Recently, It had been reported that global Islamic banking assets are expected to cross the U.S $ 2 trillion mark in 2014 up from U.S $ 1.6 trillion in 2013 with more than 500 banks operating in over 75 countries of the world. According to Ernst & Young's in its World Islamic Banking Competitiveness Report, the Islamic banking industry continues to record robust growth, with the top 20 Islamic banks registering a growth of 16 percent in the last three years. Today, Islamic finance is crossing the religious boundaries and has witnessed incredible growth, both in terms of assets and geographical spread. This is primarily because it is being seen as an ethical business model.

With global markets suffering from extreme turbulence in the wake of the credit crunch and subsequent banking crisis, it is time to examine the merits of an alternative banking model which adopts a different attitude to risk and finance, based on the principles of Shariah (Islamic law). The recent financial shocks and volatility will provide a good opportunity for the sector as non-Muslim bank customers opt for the relative safety of institutions based on the principles of Islam. Islamic finance essentially promotes financial transactions with links to the real economy and abstains from financing activities that are detrimental to the society.

The financial crisis has attracted attentions to the Islamic banks since they are said to be relatively more stable and much less affected by the crisis. Some experts and officials of participating banks have even claimed that participating banks are either not or less affected by the global financial crisis than conventional peers due to the nature of participating banking in which all financial transactions must be trade-based and asset-linked (Hidayat and Abdullah, 2012). Banking sector constitutes a major financial service sector affecting economic development. The stability and growth of any economy to a great extent depends largely on the stability of its banking sector. It functions as intermediary linking surplus and deficit units; facilitate funds for productive purpose and thereby contributes to economic development.

The 2008 financial crisis led to difficulties in many conventional banks across the globe. Islamic banks, in contrast, were largely insulated from the crisis (Willison, 2009).

Their highly regulated operational environment guided by Shariah principles prohibited investment in the type of instruments which adversely affected conventional banks and which prompted the crisis (Hassan and Dridi, 2010).

The performance and relative stability of Islamic financial institutions during the financial crisis that hit the world in 2008 stems from the distinctive features of the instruments they offer. The impressive growth rate of Islamic finance and its stability during financial crisis attracts the attention of many policy makers and financial experts worldwide. Despite the financial crisis which has plagued the economies of both industrialized and developing nations, the Islamic finance industry has been flourishing, and has enjoyed a 29 percent growth in assets to reach more than U.S.$ 600 billion in 2008 (Figure1).

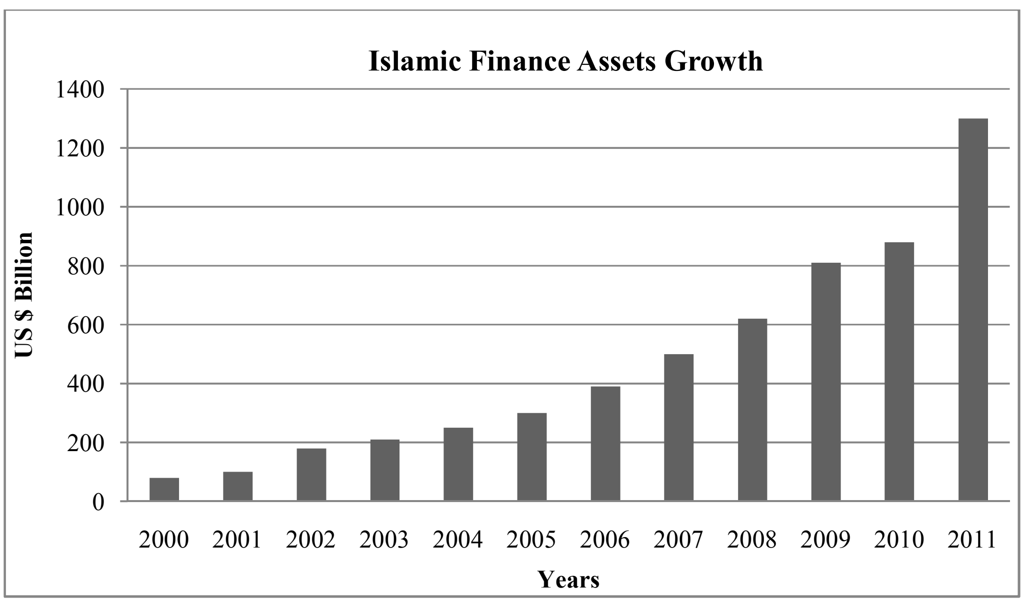

Fig. 1: Islamic Finance Assets (2000-2011)
Source: Developed by the researchers

The Middle East, particularly Gulf countries, which accounts for nearly 60% of global Islamic banking assets, is clearly a key nerve centre of Islamic finance. With the Euro Zone debt crisis deepening and the US debt crisis, investors are increasingly looking to move away from a speculative and interest-based financial system. Within the new world order of austerity and caution, Islamic finance's fundamental tenets of risk-sharing and a prohibition on interest have helped boost its image as a safe model. Though Islamic banking had a history of more than three decades, post global economic crisis of 2008 had given a lot of importance to this sector of banking by the specialists of the financial system and is one of the emerging disciplines in the research activities by academicians. There is a need to focus on the relationship between Islamic banking and financial stability, as it was reported by leading market research agencies that Islamic banking was more resilient during the crisis and acted as a shock absorber.

Despite there are many theoretical studies that examined the relationship between Islamic banking and financial Stability but specific empirical studies on the relationship between Islamic banking and financial stability, are not too many. So, the present study examines empirically the relationship between the development of Islamic finance system and financial stability in the most important countries in the Gulf region in which Islamic finance has imprint growth and development, namely United Arab Emirates (UAE), Qatar, Kingdom of Saudi Arabia (KSA), and Bahrain.

We believe that the results of this research will help decision makers and finance scholars to understand the advantages of Islamic finance in enhancing financial stability which in turn leads to economic growth for any nation. For the analysis, some widely used financial ratios of banking sectors have been computed. Trend analysis method and Analysis of Variance (ANOVA) have been used.

The paper is organized as follows. Section one presents the current stage of Islamic banking and its growth. Section two shows the Islamic banking development in the four selected countries of Gulf region. Section three illustrates the objectives and the importance of the study. Section four explores the methodology of the study. The literature review on the relationship between Islamic banking and financial stability is included in section five. Section 6 highlights the analysis and results of the study. Finally, section 7 gives the conclusions of the study.

Islamic banking in selected countries of Gulf region

Islamic finance in Middle East, particularly in Gulf countries, has become an important element of these countries' development agenda, and it is also gaining ground in the financial landscape of the region. It is a growing business as it caters to the financial needs of the people without conflicting with their social and religious values. Many real estates and construction projects are taking place in most of Middle East countries using Islamic modes of finance. This in turn, generates many job opportunities for Muslims and non-Muslims in the Middle East. The Islamic banking assets in the Middle East region have been growing exponentially over the last several years. For example, in 2004 the proportion of Islamic banking assets of the Middle Eastern banks was about 29 percent of the worldwide. Islamic banking assets have grown to 50 percent of the world in 2008. Not only the aggregate but the average asset per bank also has increased in the Middle East. Most of this growth was taking place in the Gulf Cooperation Council (GCC) countries (Ali, 2012).

The Gulf Cooperation Council (GCC) is at the heart of the Islamic world, with the two holiest shrines under the guardianship of Saudi Arabia, a kingdom that prides itself on being governed under Shariah law. It might therefore be expected that the GCC states would be at the centre of the rapidly expanding Islamic finance industry, which encompasses retail and investment banking, insurance, fund management and the issuance and trading of Shariah -compliant securities known as Sukuk. The value of Shariah -compliant assets is an impressive in the GCC, as total assets are worth over US $ 262.6 billion when the figures for Saudi Arabia, Kuwait, the United Arab Emirates, Bahrain and Qatar are aggregated, compared with $235.3 billion in the Islamic Republic of Iran (Wilson, 2009). As total Shariah -compliant assets worldwide amounted to around U.S $ 640 billion at the end of 2007; this implies that the GCC countries accounted for around 41 per cent of the total. Furthermore, the assets have been growing rapidly as shown in table 1.

Table 1: Shariah -compliant financial assets by country

Country	Assets (U.S $ billions)
Iran	235.3
Saudi Arabia	92.0
Malaysia	67.1
Kuwait	63.1
United Arab Emirates	49.1
Bahrain	37.4
Qatar	21.0
United Kingdom	18.1
Turkey	15.8
Pakistan	6.3

Source: The Banker, Supplement on the Top 500 Islamic Financial Institutions, October 2008, p. 24. The data refers to December 2007.

The United Arab Emirates (UAE) enjoys the highest economic growth rates in the Arab world. The UAE has an open economy with a high per capita income and a sizable annual trade surplus. The UAE banking sector, the largest in the Gulf Cooperation Council (GCC) by total assets, continued its positive trend in 2007. Benefiting from a benign operating environment and a strong demand for credit; operating profits for most banks grew in double digits. Islamic banking has been continuously gaining popularity in the UAE. The two largest UAE Islamic banks are Dubai Islamic Bank (DIB) and Abu Dhabi Islamic Bank (ADIB). Conventional banks also have Shariah compliant subsidiaries and Islamic windows to facilitate Islamic transactions.

The Islamic banking and finance sector has a good percentage of assets of banking system. For example, the assets of Islamic banks expanded by 27 percent during 2006–2010, much faster than the growth in assets of conventional banks. The UAE Islamic banking sector's performance continues to benefit from the buoyant economic environment. Total assets of Islamic banks in the UAE have increased from less than U.S $ 1 million in 1990 to more than U.S $ 58,000 million in 2010 with a cumulative increase of 98.47% as shown in figure 2.

Presently, there are 23 national banks and 22 foreign banks operating in the UAE. Out of the 23 national banks, 5 are full-fledged operating under Shariah principles and the remaining banks have both conventional and Islamic banking operations.

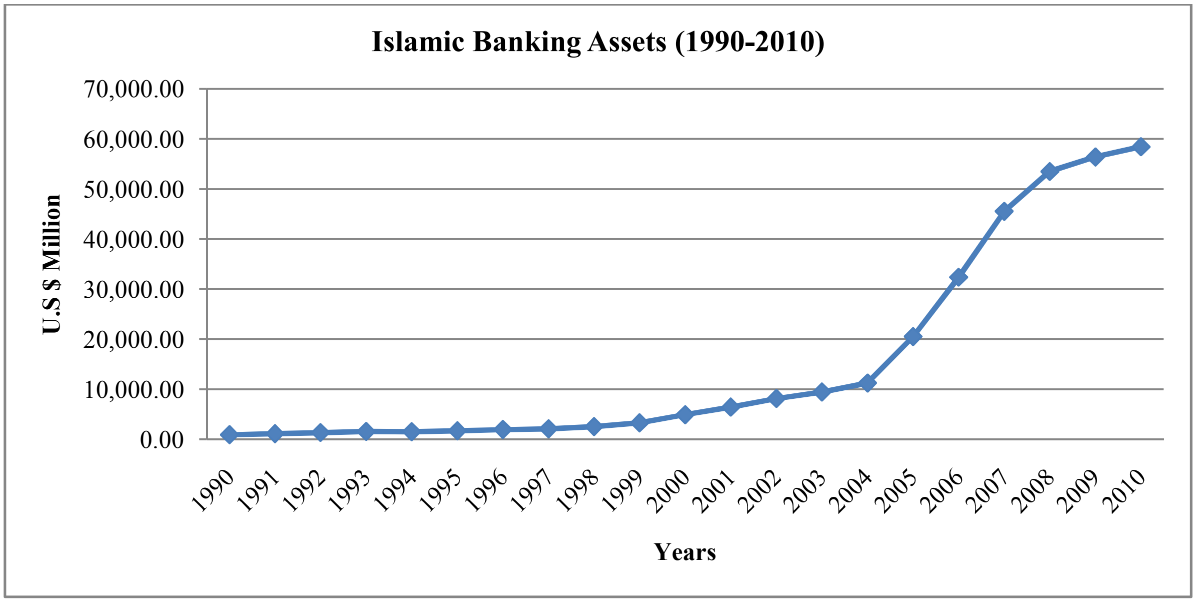

Fig.2: Islamic Banks Assets in UAE (1990-2010)

Source: Developed by the researchers

Qatar has the highest GDP per capita in the world as of 2012, according to World Fact book[1].The economic growth of Qatar has been almost exclusively based on its petroleum and natural gas industries, which began in 1940[2]. The banking sector in Qatar benefited from rapid economic growth. As a result, Islamic banks posted strong results over the past few years. During the period from 1990 till 2008, combined assets of Qatar Islamic banks, including Qatar International Islamic Bank, Qatar Islamic Bank, Masraf Al Rayan and First Finance Company, generated an impressive increase from less than U.S. $ 562 million in 1990 to more than U.S $ 30,000 million in 2008 with a cumulative increase of 98.13% as shown in figure 3.

The Banking industry in Qatar consists of 11 local banks registered with the central bank and 7 foreign banks with branches in Qatar. Under the list of local banks, there are 4 Islamic

[1] This information can be reached through this website www.cia.gov/library/publications/the-world-factbook/rankorder/2004rank.html

[2] This information can be reached through the website www.onlineqatar.com/info/tourist-info.aspx

banks fully operating under Shariah principles, 3 conventional banks with Islamic windows and 5 conventional banks with no Islamic banking operations.

Shariah-compliant assets, offered by both fully Islamic banks and Shariah-compliant windows (or branches) of conventional banks, experienced a strong growth of over 95% in 2008 (Blominvest report, 2009).

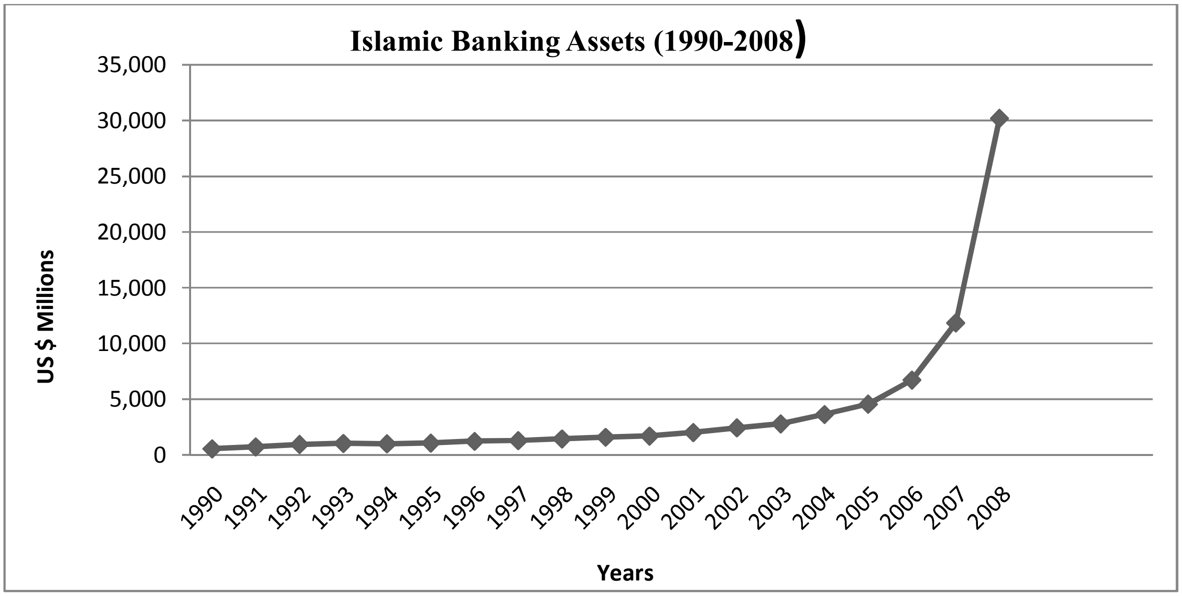

Fig.3: Islamic Banking Assets in Qatar (1990-2008)

Source: Developed by the researchers

This trend is likely to continue as banks see Islamic banking as an opportunity to attract new clients. Islamic banking assets in Qatar witnessed a strong growth over the last couple of years, mainly driven by robust economic growth, increased demand for Shariah-based products and government willingness to promote the Islamic Banking industry. Many underway projects, including petrochemical, housing and construction projects are demanding Shariah-based products, and this is likely to act as a future driver for Islamic banking, as the country has outlined public investment plans worth $95bn for the period until 2016.

Kingdom of Saudi Arabia (KSA) is one of only a few fast-growing countries in the world with a relatively high per capita income of $ 24,200 in 2010 (Economy report, 2010). Saudi Arabia's command economy is mainly petroleum-based. Saudi Arabia is the second largest Islamic finance economy globally. The Kingdom also has the largest Islamic banking market with total assets of $ 217 billion (Saudi gazette report, 2013). Saudi Arabia strictly adheres to Islamic laws; therefore Islamic banking is not only exceptionally popular within the society but also has benefited from the authorities' support since its inception. As a result, all Saudi banks have Shariah-compliant operations, either in the form of Islamic windows or as full-fledged Islamic banks.

The Saudi Arabian banking sector, that combines full-fledged Islamic banks and institution running both Shariah-compliant and conventional operations, recorded an asset growth of 27.3% during the first nine months of 2008 to reach at U.S $ 338.6 billion over the same period a year earlier. Combined bank deposits and total credit also grew at a healthy pace, of 19.1% to U.S $ 214.4 billion and 36.1% to U.S $ 266.6 billion respectively. Combined assets of full-fledged Islamic banks (Al-Rajhi, Al-Jazira, Al-Bilad and Al Inma bank) registered a CAGR of 22% during the period from 2003 till 2007, and accounted for 16.2% of total bank assets during 2007 (Blominvest report, 2009).

Islamic banks posted strong results over the past few years in the Kingdom of Saudi Arabia (KSA). During the period from 1990 till 2010, combined assets of full-fledged Islamic banks in the kingdom of Saudi Arabia, generated an impressive growth from less than U.S. $ 4,941 million in 1990 to more than U.S $ 70,839 million in 2010 with a cumulative growth up to 93.02 percent as shown in figure 4. The Saudi Arabian banking sector comprises 22 commercial banks, including 12 local banks and 10 branches of Gulf and foreign banks.

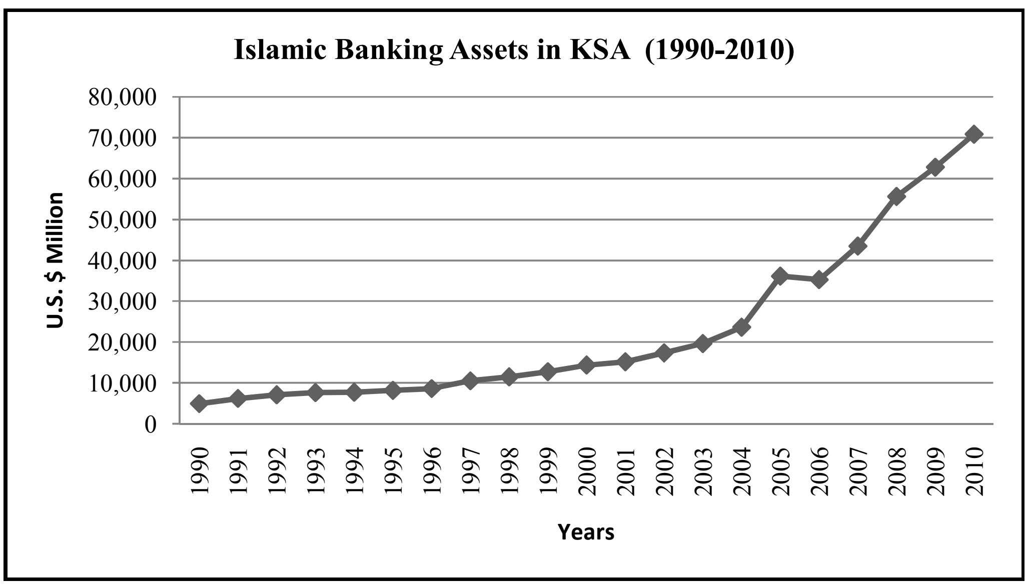

Fig. 4: Islamic Banks' Assets in Kingdom of Saudi Arabia (1990-2010)

Source: Developed by the researchers

Out of the 12 local banks, four (Al-Rajhi, Al-Jazira, Al-Bilad and Al Inma Bank) are full-fledged Islamic banks. Al Rajhi is the third-largest Saudi bank, and the world's largest Islamic financial institution with total assets of U.S $ 33.3 billion recorded at the end of 2007. Total bank assets stood at 132.3% of GDP as compared to full-fledged Islamic bank assets penetration of 20.1% for 2007.

Kingdom of Bahrain has the fastest growing economy in the Arab world[3]. It also has the freest economy in the Middle East, and is twelfth freest overall in the world, based on the 2011 Index of Economic Freedom[4]. Bahrain's banking and financial services sector, particularly Islamic banking, have benefited from the regional boom driven by demand for oil. Petroleum production and processing account is Bahrain's most exported product, accounting for 60% of export receipts, 70% of government revenues, and 11% of GDP[5].

The banking sector in Bahrain benefited from rapid economic growth. As a result, Islamic banks posted strong results over the past few years. During the period expanding from 1990 till 2008, combined assets of all Islamic banks generated a impressive growth from less than U.S.$ 659 million in 1990 to more than U.S.$ 37,000 million in 2008, with a cumulative increase up to 98.22 % as shown in figure 5.

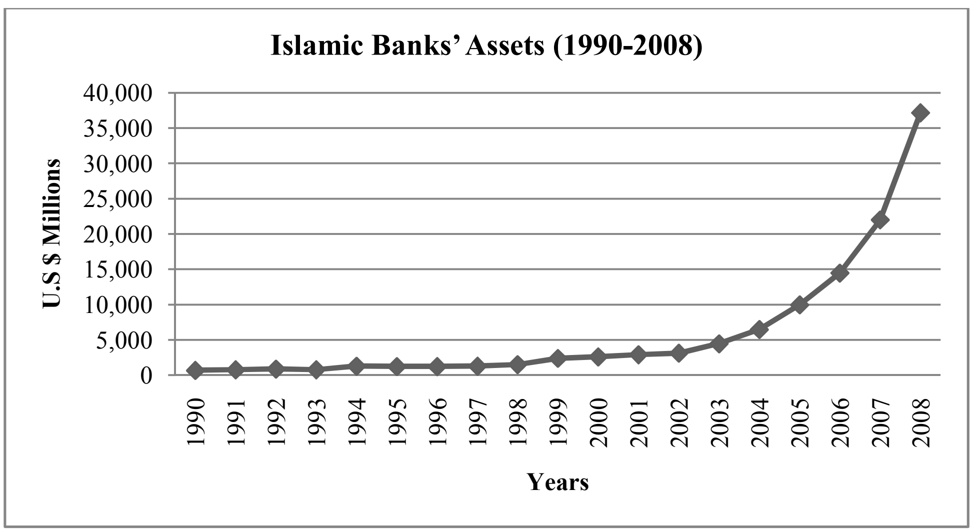

Fig.5: Islamic Banking Assets in Bahrain (1990-2008)

Source: Developed by the researchers

[3] This information can be reached through the website http://www.arabianbusiness.com/bahrain-expected-bustle-149877.html.

[4] This information can be reached through the website http://www.heritage.org/index/

[5] This information can be reached through the website https://www.cia.gov/library/publications/the-world-factbook/geos/ba.html

In recent years, Bahrain has rapidly become a global leader in Islamic finance, playing host to the largest concentration of Islamic financial institutions in the Gulf region. It is at the forefront in the market for Islamic bonds (Sukuk), including short-term government Sukuk as well as leasing securities. The market share of Islamic banks correspondingly increased from 1.8% of total banking assets in 2000 to 13.3% in August 2012. From November 2008, there are 417 financial institutions in Bahrain, including 59 IFIs. The banking sector consists of 88 conventional banks (24 retail and 64 wholesale) and 24 Islamic banks. The financial sector has a 22% share in GDP, making it the second most important industry in the country (Blominvest report, 2009).

Research Problem, Objectives and Importance

There is no doubt that Islamic financial sector development plays an important role in the overall development and stability of an economy. Although, there are many empirical studies that have examined the relationship between banking sector and financial stability, but specific empirical studies on the relationship between Islamic banking and financial stability during the global financial crisis are not too many. So, this study examines empirically the relationship between Islamic banking and financial stability in the selected countries from Gulf region before, during, and after the 2008 global financial crisis, and particularly the study aims to achieve the following objectives:

- To compute and analyze some financial performance ratios of all full-fledged-Islamic banks for the selected countries of Gulf region with special reference to liquidity and capital adequacy ratios from 2005 to 2010.
- To understand the impact of global financial crisis on the computed financial performance ratios of Islamic banks in the selected countries by testing the following hypothesis:

  H_0: There is no significant difference before, during, and after global financial crisis on financial performance of full-fledged Islamic banks in the selected countries of Gulf region.

  H_1: There is a significant difference before, during, and after global financial crisis on financial performance of full-fledged- Islamic banks in the selected countries of Gulf region.

The importance of this study emanates from the fact that it addresses an important sector in the world economy, and particularly in the Gulf region economies, namely the Islamic finance industry. It touches everyone in the society, and has a great effect on any economy positively or negatively. Muslims represent about a quarter of the world's population, and there is greater awareness of and demand for Islamic-based financial products by Muslim and Non-Muslim consumers.

Research Methodology and Data

The qualitative and quantitative methods have been used. The qualitative approach is used to review the existing literature from all resources such as academic, scholarly journals, magazines, documents, workshops, and other related literature of Islamic finance industry. The quantitative approach is used to test the relationship between Islamic banking and financial stability in the selected countries of Gulf region. Specifically, the study conducts a financial ratio analysis on liquidity and capital adequacy for all full-fledged-Islamic banks in these countries.

Data is collected from balance sheet, income statements and cash flow statements published by all full-fledged-Islamic banks in the select countries, as shown in annex 1. Islamic Banks and Financial Institutions Information (IBIS)[6]database for all Islamic banks working in the selected countries is used. To serve the purpose of the study, some appropriate financial ratios are calculated based on average for the period of 2005 to 2010.

The ratio analysis is widely adopted by many studies to evaluate the banks' performances (see, for example, O'Connor, 1973; Libby, 1975; Chen and Shimerda 1981; Ross, 1991; Spindler, 1991; Sabi, 1996; Hempel and Simonson, 1998). Among the most important advantage of ratio method is that it removes the disparities between banks as they are not equal in size (Samad, 2004).

The six year period has been divided into three parts before crisis, during crisis, and after crisis. Although it is difficult to say, what is the exact time period for the start of crisis, as it varies in different parts of the world. Based on the previous studies, the data has been divided into three time periods 2005-2006 before the crisis, 2007-2008 during the crisis, and 2009-2010 after the crisis. For the analysis, firstly, Microsoft Excel has been utilized for financial ratios calculations and charting. Secondly, SPSS software has been used to focus on

[6]The Islamic Banks and Financial Institutions Information (IBIS) database is built to help researchers and finance professionals working in the area of Islamic economics and finance. It seeks to provide comprehensive data and information on the activities of Islamic finance institutions, up-to-date research and literature. It can be reached through the website http://www.ibisonline.net/IBISHomepage.aspx

hypothesis testing to assess the impact of global financial crisis on the performance ratios of Islamic banks. The related samples have been tested by One Way Analysis of Variance (ANOVA). The financial ratios are classified in to two categories, i.e., liquidity and capital adequacy ratios.

Liquidity Ratios

Liquidity means how quickly a bank can convert its assets into cash at face value to meet the cash demands of the depositors and borrowers. Two important ratios are applied which are used as below:

- Investments Asset Ratio (IAR): (Total Investments / Total Assets) * 100. This liquidity ratio indicates what percentages of the assets of the bank are tied up in loans. The higher this ratio is the less liquidity of the bank.
- Liquid Assets Ratio (LAR): (Cash and Its Equivalents + Investments in Bonds, Bills, and Securities) / Total Assets) *100. This is a deposit run off ratio and looks at what percentage of customer and short term funds could be met if they were withdrawn suddenly, the higher this percentage, the more liquid the bank is and less vulnerable to a classic run on the bank.

Capital Adequacy Ratios

Capital adequacy ratios test the bank's capacity to meet the time liabilities and other risks such as credit risk, operational risk. It is used as a measure of strength and stability of the financial systems around the world. To measure the credit/loan risk performance of the banks, the following two financial ratios are used:

- Equity Total Assets Ratio (EQTAR): (Total Share Holders' Equity / Total Assets) * 100. As equity is a cushion against asset malfunction, this ratio measures the amount of protection afforded to the bank. The higher this figure the more is the protection
- Equity / Liabilities (ELR): (Total Shareholders' Equity / Total Liabilities) * 100. This leverage ratio measures how the assets are financed with debt or with equity. A ratio greater than one means assets are mainly financed with equity; less than one means the debt provides most of the financing. Since a lower ratio generally means that a bank has

been aggressive in financing its growth with debt, volatile earnings can result owing to the additional cost of operations.

Literature Review

Since, there is a strong relationship between stability and resilience of banking sector and economic safety, studies have been done to see which banking sector, conventional or Islamic, is more stable and robust.

Siraj, k. and Pillai, P. (2012) in their research found that Islamic banks have done better than conventional banks in GCC region during 2005-2010. They revealed that Islamic banks are more equity financed than conventional banks. The performance indicators of profitability, liquidity, and capital Adequacy were less affected by financial crisis in Islamic banks compared to conventional banks, as may be noted from the trends since 2007.

Abdulle and Kassim (2012) conducted a comparative analysis on the impact of the 2007-2008 global financial crisis on the Islamic and conventional banks in Malaysia. Three performance indicators, namely profitability, liquidity and credit risk of the banking institutions are being considered. The study covers a five-year period from 2006 to 2010, and divides the sample period into before, during, and after the financial crisis. The study revealed that Islamic banks were holding more of the liquid assets than their conventional counterparts, thus are less exposed to the liquidity risks due to the financial crisis.

Aktas, M. (2013) in his study examined, whether participating banking sector is more stable than conventional banking sector during the global economic crisis in Turkey. The study used trend analysis method for 2006-2011 on yearly basis. Profitability, liquidity, riskiness and asset quality ratios of conventional and participating banking sectors are utilized. Results of the study showed that participating banking sector is more stable than conventional banking sector in terms of profitability, capital adequacy and liquidity during the analysis period, which includes 2008 global economic crisis.

Sehrish. et al. (2012) in their study compared the financial performance of Islamic banking sector and conventional banking sector in Pakistan from year 2007-2011. They used six financial ratios including capital adequacy and profitability ratios. The results show that Islamic banks are less risky in terms of dealing in loans and less efficient in expense management as compared to the conventional banks in Pakistan.

Rafiuddin, and Alam, Z. (2012) in their study showed the comparative analysis of Islamic Banks and Conventional Banks of the United Arab Emirates. They utilized average profitability, liquidity and risk ratios for Islamic and conventional banks for a limited period of 5 years, i.e., 2005-2009. Findings of their study show that the conventional banks are more profitable compared to the Islamic banks and Islamic banks have high liquidity and low risk in comparison to Conventional banks. Also, it showed that Islamic banks registered a higher growth rate after the economic meltdown of 2008.
Kader and Asarpota (2007) applied financial ratios to three Islamic banks and five conventional banks in UAE for the time period 2000 to 2004 to get the glimpse of both the sectors' performance. These financial ratios covered the profitability, liquidity, risk and solvency, and efficiency of banks. The results indicated that the Islamic banks of UAE were more profitable, more efficient, less liquid and less risky than conventional banks.

Samad and Hassan (2000) analyzed the performance in terms of profitability, liquidity, risk and solvency, and community involvement of a Malaysian bank, Bank Islamic Malaysia Berhad, for the period 1984-1997. The findings showed that the bank was a liquid and it was supposed not to have any liquidity issues. The study established that Bank Islamic Malaysia Berhad was comparatively less risky, less profitable and more solvent as compared to conventional banks.

Shafique et al., (2008) in a study have found that the recent global financial crisis has badly affected the conventional banking system everywhere in the world. Participation banking system has also been slightly affected by the global financial crisis but performance of participation banks during the global financial crisis is better than conventional banks. In addition, they state that risk in participation banks is less than conventional banks because of its interest free nature.

Parashar and Venkatesh (2010) conducted a study about the performance comparison of participating and conventional banking during the global economic crisis. They have used six ratios to analyze and compare the performance of participating banks and conventional banks. Their study shows that participating banks have suffered more than conventional banks during the recent global financial crisis in terms of capital ratio, leverage and return on average equity, while conventional banks have suffered more than participating banks in terms of return on average assets and liquidity. Over the four years period, i.e., 2006-2009, participating banks performed better than conventional banks.

Hidayat and Abdullah (2012) examined the impact of global financial crisis towards the financial performance of participating banking industry in Bahrain. Moreover, it also utilized bank specific factors as predictors for participating bank performance in Bahrain. Panel regression model has been used to analyze the data. The results show that there is no significant impact of financial crisis upon the financial performance of participating banks during the global crisis.

Results and Discussions

This section shows the role of Islamic finance in enhancing financial stability in the four selected countries of Gulf region. The results of the four countries are summarized together with regard to the relationship between Islamic financial system and financial stability, since financial stability is a critical factor in the growth of the economies of these countries and the world as well.

6.1 Liquidity Ratios Results

- **Investments Assets Ratio (IAR)**

Table 2 shows average results of Investment Asset Ratio of all Islamic banks in the selected countries of the Gulf region from 2005-2010. This measure shows the percentage of assets that are tied up in loans. Lower the ratio, the more liquid the bank is. From the analysis of figure 6, it is a quite clear that the liquidity of the full-fledged Islamic banks is improving through the time. Islamic banks have achieved a lower (IAR) ratio in three consecutive years, 2008, 2009, 2010 which includes the global financial crisis for the selected countries. On an average, Islamic banks registered IAR 55.9% during 2010 for Bahrain, while it stands at 63.35% in 2008 for Qatar.

Table 2: Average Investment Asset Ratio (2005-2010)

Years	Average Investment Assets Ratio (%)			
	UAE	Qatar	KSA	Bahrain
2005	83.17	57.46	74.97	64.79
2006	86.93	51.13	73.60	64.28
2007	85.65	58.56	62.14	57.22
2008	88.84	63.35	74.67	65.69
2009	85.13	56.46	46.11	64.81
2010	76.50	55.90	66.63	63.12

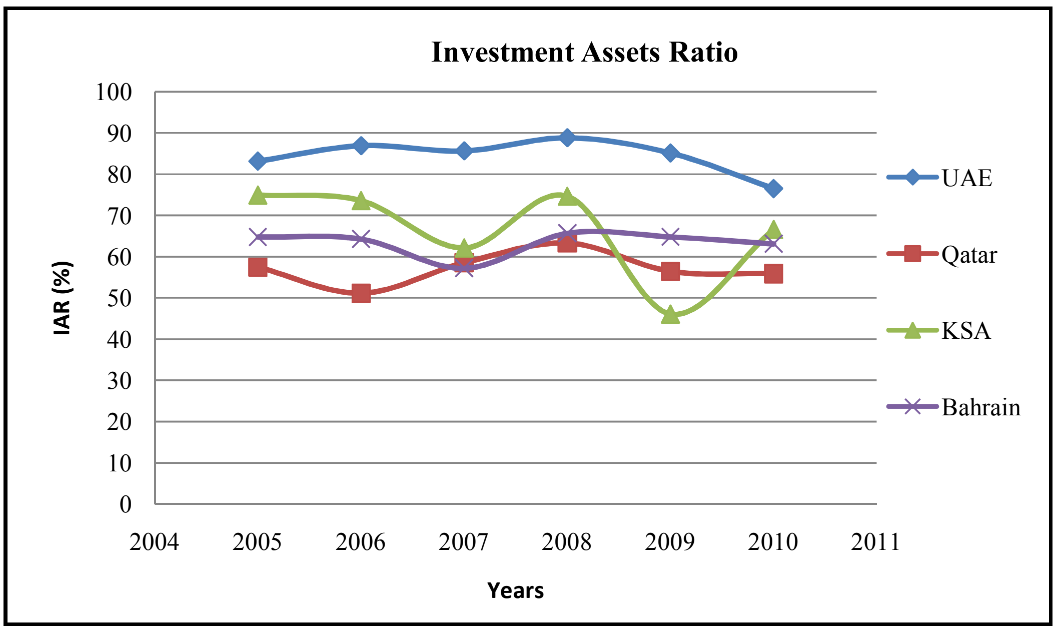

Fig.6: Investment Asset Ratio

Source: Developed by the researchers

From figure 6, it is evident that the IAR ratio is favorable for all Islamic banks but there exists a decline in IAR of Islamic banks from 2008 onwards in the selected countries. This is consistent with prior studies that showed Islamic banking sector is a more liquid sector (Aktas, M. (2013), Rafiuddin and Alam, Z. (2012), and Samad& Hassan (2000).

- **Testing of Hypothesis**

A One way ANOVA is used to test the hypothesis as shown in table 3.

Table 3: One Way ANOVA (IAR)

Countries	(Investment Assets Ratio)			
	F test	P. value	level of significance	Decision
UAE	1.298	0.393	0.05	Since 0.393 > 0.05, **Ho is accepted**
Qatar	2.233	0.255	0.05	Since 0.255> 0.05, **Ho is accepted**
KSA	7.026	0.074	0.05	Since 0.074> 0.05, **Ho is accepted**
Bahrain	0.430	0.685	0.05	Since 0.685> 0.05, **Ho is accepted**.

- **Liquid Assets Ratio (LAR)**

Table 4 shows average results of Liquid Assets Ratio of all Islamic banks in the selected countries from 2005-2010. It is clear from figure 7 that the liquidity of the Islamic banks for the selected countries has increased in 2008 except for KSA. Islamic banks have achieved a high (LAR) ratio of 32.44% in case of Bahrain in 2008. Islamic banks showed a higher run off ratio from 2008 onwards. This indicates that the Islamic banks were holding a higher percentage of deposits and short term funds to meet any sudden withdrawals during this period.

Table 4: Average Liquid Asset Ratio (2005-2010)

Years	Average Liquid Asset Ratio (%)			
	UAE	Qatar	KSA	Bahrain
2005	18.33	16.90	22.46	34.35
2006	14.49	23.33	21.86	39.55
2007	17.17	21.87	33.96	42.72
2008	12.89	16.56	26.03	32.44
2009	17.72	22.93	31.68	33.55
2010	23.72	37.34	22.68	35.23

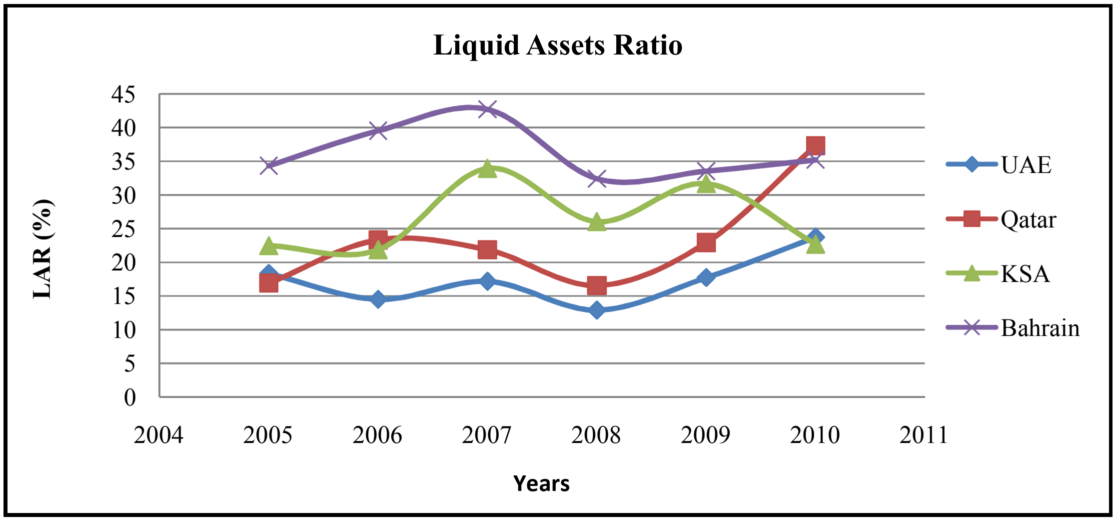

Fig.7: Liquid Asset Ratio

Source: Developed by the researchers

- **Testing of Hypothesis**

One way ANOVA has been applied, as shown in table 5.

Table 5: One Way ANOVA (LAR)

Countries	(liquid Assets Ratio)			
	F test	P. value	α (0.05) level of significance	Decision
UAE	1.531	0.348	0.05	Since 0.348> 0.05, **Ho is accepted**
Qatar	1.591	0.338	0.05	Since 0.338 > 0.05, **Ho is accepted**
KSA	3.004	0.192	0.05	Since 0.192 > 0.05, **Ho is accepted**
Bahrain	0.523	0.792	0.05	Since 0.792> 0.05, **Ho is accepted.**

The p values are 0.348, 0.338, 0.192 and 0.792 for the four respective countries, and these are more than α (0.05) level of significance, which means that null hypothesis is accepted. It is obvious from the table that there is no significant difference in (LAR) before, during, and after the global financial crisis. This result indicates that Islamic banks are not affected by global financial crisis. This also implies that the Islamic banks were holding more liquid assets than that of conventional banks, and are less exposed to liquidity risk.

6.2 Capital Adequacy Ratios Results

- **Equity Total Assets Ratio (EQTAR)**

Table 6 shows average results of Equity Total Assets Ratio of all full-fledged Islamic banks in UAE, Qatar, KSA, and Bahrain, from 2005-2010. From the analysis of figure 8, it is evident that the (EQTAR) of the full fledged-Islamic banks is stable during the study period which includes 2008 global financial crisis. It is also observed that the four countries are moving in the same direction from 2008 onwards. This means that Islamic banks in these countries have been protected from the financial crisis. Figure 8 also shows that Islamic banks are enjoying high (EQTAR) throughout the time period of this study which means that Islamic banks have quite a large capacity of absorbing loan losses. This is consistent with prior studies like Siraj, K. and Pillai, P. (2012), Sehrish, S. et al. (2012), kader and Asapota (2007) which found that Islamic banking sector is more equity financed than conventional banks.

Table 6: Average Equity Total Assets Ratio (2005-2010)

Years	**Average Equity Total Assets Ratio (%)**			
	UAE	Qatar	KSA	Bahrain
2005	79.97	19.69	24.69	51.76
2006	56.80	27.73	21.12	54.09
2007	69.69	32.18	19.46	55.67
2008	64.75	25.86	20.12	55.52
2009	69.40	29.33	24.80	58.24
2010	55.90	26.82	26.43	52.77

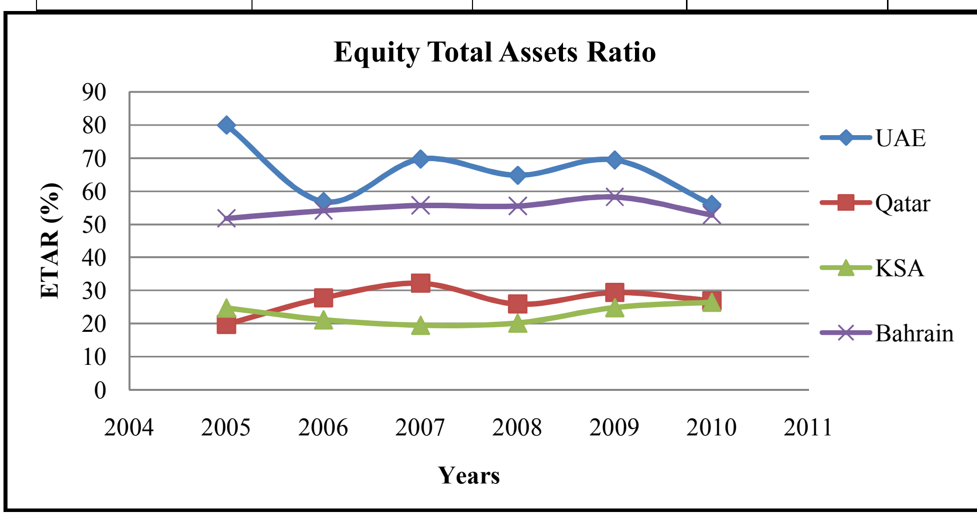

Fig. 8: Equity Total Assets Ratio

Source: Developed by the researchers

- **Testing of Hypothesis**

One way ANOVA has been used and the results are shown in table 7.

Table 7: One Way ANOVA (EQTAR)

Countries	Avg. Equity Total Assets Ratio (%)			
	F test	**P. value**	**level of significance**	**Decision**
UAE	0.148	0.868	0.05	Since 0.868> 0.05, **Ho is accepted**
Qatar	0.868	0.504	0.05	Since 0.504 > 0.05, **Ho is accepted**
KSA	6.657	0.079	0.05	Since 0.079 > 0.05, **Ho is accepted**
Bahrain	0.780	0.534	0.05	Since 0.534> 0.05, **Ho is accepted**.

The p values of the four countries respectively are 0.868, 0.504, 0.079, and 0.534, and these values are more than α (0.05) level of significance, which means the null hypothesis is accepted. It may be inferred from the analysis that there is no significant relationship and difference in (EQTAR) before, during, and after the global financial crises. This result indicates that Islamic banks have been protected from the crisis which goes on to show the stability of Islamic banks. Also, it implies that Islamic banks are depending largely on the equity capital, and equity financing works as a cushion against asset malfunction.

- **Equity / Liabilities (ELR)**

Table 8 shows average results of Equity Liabilities Ratio of all Islamic banks in the selected countries of Gulf region from 2005-2010. From the analysis of figure 9, it is evident that the (ELR) of the Islamic banks is also stable during the study period. It registered a high value 107.25% in 2005 for UAE and 52.69% for Qatar in 2007. A bank with higher ELR is considered to be better compared to the bank with lower ELR. Figure 9 shows that Islamic banking is enjoying high (ELR). This means that Islamic banks have quite a large capacity to absorb the financial shocks.

Table 8: Average Equity Liabilities Ratio (2005-2010)

Years	Average Equity liabilities Ratio (%)			
	UAE	Qatar	KSA	Bahrain
2005	107.25	25.48	36.71	61.08
2006	71.90	42.2	31.84	58.12
2007	85.49	52.69	24.26	46.63
2008	78.77	38.44	26.11	43.77
2009	84.29	48.73	40.12	49.15
2010	68.61	21.3	38.12	39.06

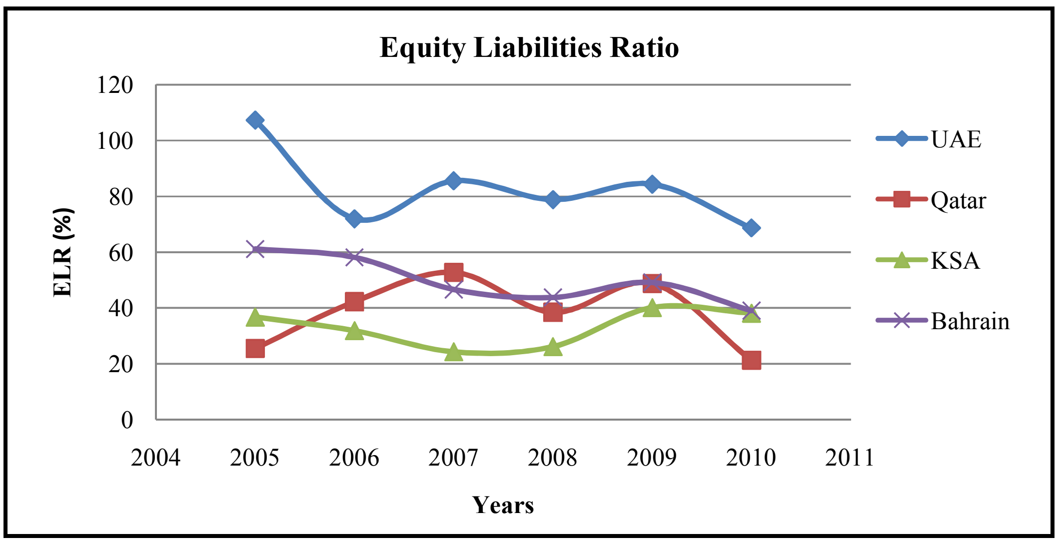

Fig. 9: Equity Liabilities Ratio

Source: Developed by the researchers

- **Testing of Hypothesis**

One way ANOVA test has been used. Results are shown in table 9.

Table 9: One Way ANOVA (ELR)

Countries	Average Equity liabilities Ratio			
	F test	**P. value**	**level of significance**	**Decision**
UAE	0.337	0.738	0.05	Since 0.738> 0.05, **Ho is accepted**
Qatar	0.405	0.669	0.05	Since 0.669 > 0.05,**Ho is accepted**
KSA	22.772	0.021	0.01	Since 0.021 > 0.01**, Ho is accepted**
Bahrain	7.556	0.067	0.05	Since 0.067> 0.05, **Ho is accepted**.

The p values for the selected countries are 0.738, 0.669, and 0.067 respectively, and these values are more than α (0.05) level of significance, except for KSA where P value 0.02 is more than (0.01) level of significant, meaning that the null hypothesis is accepted. This indicates that Islamic banks have remained unaffected during the global financial crisis. It indicates that Islamic banks' ability to absorb financial losses and to deal with the non-performing/impaired loans is higher than other banks. The findings depict that Islamic banks are less risky than that of conventional banks in the selected countries of GCC. These results are consistent with those of Samad and Hassan (2000), Shafique et al. (2008) and Abdulleand Kassim (2012), Aktas, M. (2013).

7. Conclusions

In this paper, we have explored the performance and stability of Islamic banking in the most significant countries in the Gulf region for Islamic finance industry. The study examined the impact of global financial crisis beginning 2008 onwards on the liquidity and capital adequacy ratios of all full-fledged-Islamic banks in the selected countries of Gulf region. The results indicate that Islamic banks are holding more liquid assets and are less exposed to liquidity risk. The higher liquidity ratio of Islamic banks compared to that of conventional banks could be due to limitation of scope of the Islamic banking investment.

The Analysis of Variance (ANOVA) results show that there is no significant difference before, during, and after global financial crisis on the liquidity ratios of Islamic banks. This indicates that the Islamic banks were holding a higher percentage of deposits and short-term funds to meet the sudden withdrawals. Furthermore, it has been inferred from the results of the study that capital adequacy ratios are stable through the period under study. Total equity ratios registered a higher proportion in total assets of Islamic banks for the selected countries. This implies that Islamic banks have quite a large capacity of absorbing loan losses. This result supports the view that Islamic banks are more equity financed and depends on profit and loss sharing relationship rather than debt-credit relationship unlike that of conventional banks.

The results of the four selected countries are supporting the viewpoint that Islamic finance is more stable and safe way of financing. A closer look at the capital adequacy and liquidity ratios in United Arab Emirates show good results compared to Qatar, KSA, and Bahrain. This means that United Arab Emirates has a competitive environment and good regulations for Islamic banking industry compared to other countries. Qatar and Bahrain show similar indicators for capital adequacy and liquidity ratios. For the Kingdom of Saudi Arabia, the results provide good evidence in favour of the stability of its Islamic financial system. Generally, the findings of the four selected countries of the Gulf region show a strong evidence for the stability of their Islamic financial system under different financial shocks.

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Annex 1:

List of full-fledged Islamic Banks for UAE, Qatar, KSA, and Bahrain

1. Islamic Banks in UAE

No	**Name of the bank**	**Date of Establishment**
1	Dubai Islamic bank	1975
2	Abu Dhabi Islamic bank	1997
3	Sharjah Emirates bank	2002
4	Dubai bank	2002
5	Emirates Islamic bank	2004

2. Islamic Banks in Qatar

No	**Name of the bank**	**Date of Establishment**
1	Qatar Islamic Bank	1982
2	Qatar International Islamic Bank	1990

3	First Finance Company (Q.S.C)	1999
4	Masraf Al Rayan	2002

3. Islamic Banks in the Kingdom of Saudi Arabia

No	**Name of the bank**	**Date of Establishment**
1	Al Rajhi Bank	1981
2	Bank Aljazira	1976
3	Alinma Bank	2006
4	Bank Albilad	2004

4. Islamic Banks in Bahrain

NO.	**Bahrain Banks**	**Date of Establishment**
1	Al Baraka Islamic Bank B.S.C. (E.C.)	1984
2	Bahrain Islamic Bank B.S.C.	1979
3	Shamil Bank	2000
4	ABC Islamic Bank (E.C.)	1980
5	Al Amin Bank	2001
6	Citi Islamic Investment Bank (E.C.)	1996
7	Faysal Islamic Bank of Bahrain (E.C.)	1982
8	Arcapita Bank B.S.C.	2005
9	Gulf Finance House	1999
10	Investors Bank B.S.C.	1998
11	Al Salam Bank (Bahrain)	2006

NO.	Bahrain Banks	Date of Establishment
12	Kuwait Finance House Bahrain	2002
13	Capivest B.S.C.	2005
14	Bank Alkhair	2004
15	Khaleeji Commercial Bank BSC	2003
16	International Investment Bank	2003
17	First Investment Bank	2007
18	First Energy Bank B.S.C.	2008
19	Elaf Bank	2007
20	Venture Capital Bank B.S.C.	2005
21	Seera Investment Bank	2006
22	Global Banking Corporation B.S.C. (	2007
23	Liquidity Management Centre B.S.C.	2005
24	Capinnova Investment Bank	2009