

Applying the Altman model to measure the financial safety of Bahraini banks during the period 2005-2015 -A comparative study-

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Abstract:

This study aims to shed light on the measurement of the financial safety of Bahraini banks based on the Altman model by examining the extent to which these banks were affected by the various crises during the study period 2005-2015, starting with the global economic crisis that hit the financial sector in 2008, the political crisis experienced by the Kingdom as a result of the protest movement in February 2011, and ending with the crisis of the collapse of oil prices since June 2014.

A sample of banks was selected from the Kingdom of Bahrain to analyze the most important banking indicators, as well as measuring their stability during the period from 2005 to the end of 2015. In order for the results to be meaningful and clear, a comparative study was made by choosing similar Traditional and Islamic banks of the same state and analyzing its similar indicators during the same period.

Keywords: Bahraini Banks, financial crises, financial safety, altman model.

Jel Classification Codes: : G21, G01, C41

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1. INTRODUCTION

The Bahraini economy has seen many tremors during the period (2008-2011), starting with the financial crisis of 2008 followed by the local political crisis, caused by the protests in 2011. The fall of oil prices was another problem that the Bahraini kingdom faced.

The financial crisis of 2008 that shadowed the international economy was more important than any of the previous crisis even that of 1929. The historical importance of the crisis of 2008 is not only due to its impact on the world economy but it raises the issue of reconsidering the capitalist system itself.

The crisis of 2008 was characterized by the extent of its impact on all the countries in the world. It is due to the economic globalization and the overlap between the economies of the world. The Gulf Cooperation Council (GCC), to which Bahrain is a member state, is one of the Arab economies most open to the world. This is due to the economic policies followed by GCC, which encourage direct investment in the Gulf countries and abroad and the foreign investment in the Gulf. The impact of the crisis of 2008 was great and this impact has spread throughout the world quickly. It happened due to the economic globalization and correlation between the world economies with the Gulf economies, especially the Bahraini one. The depression that the world economy has seen influenced greatly the Gulf economies, where growth fell because of the slowdown in economic activity. The fall of oil and gas prices reduced the activity of the Gulf financial markets.

While the world economy started to recover from the financial crisis, the Bahrain was living a political crisis. It was due to the extent of the Arab spring, some young Bahraini through the social media called for popular protests in February 14, 2011, asking for institutional monarchy; improvement of the standard of living and to stop the political naturalization. After the fall of victims, the protests raised their demand for the fall of the ruling regime.

These protests led the Gulf States to move quickly to control the situation and contain them, through the intervention of the Peninsula shield in the Bahrain (Rashad, 2014, p. 112).

These events affected the financial sector, especially in terms of increasing risks in the business environment in the kingdom of Bahrain. They reflected on insurance risk contract (CDS), where the index rose from its usual level of 180 – 190 points to more than 450 points.

When the Bahrain was trying to quell the political tension in the region, the oil prices fell. Starting from July 2014 estimated at more than 60%, the result was the slowdown in the economies of the GCC countries, which rely a lot on oil revenues, an average, about 46% of revenue in GCC, While oil exports account for nearly 75% of total exports (Ghaffar, 2016, p. 2). It is worth to mention that the oil and its derivatives is one of the most important products exported by Bahrain. It represents 60% of oil exports earnings, 70% of government revenues, and 11% of GDP of Bahrain (Oxford.B.G, 2012, p. 149).

Although Bahrain is considered as the least well- oil producer in gulf corporation council (GCC), but it is the most affected country by the decline of oil prices, this is because it does not possess huge oil reserves like Saudi Arabia or other Gulf countries. The fall of oil prices prevents Bahrain to maintain its support to its projects, while it follows an austere policy by lowering costs, public spending and stops some projects before being completed. The agency Standard and Poor's Report (S&P) for financial services stressed that the fall of oil prices will lead to discover structural weaknesses in the general budget of Bahrain, and the decline in government revenues by 10% in 2015. This was the main reason to change the classification of Bahrain from stable state to negative one (Dyck, 2016, p. 2).

The impact of these various crises has been negative on the Bahraini economy in general, and especially on the banking sector. It was natural that the banks were affected by the events. This is due to the importance of the banks in giving an image about the stability of any economy. The negative impact has seen through the low demand of loans because of the economic slowdown as well as the tightening of borrowing conditions by the Bahraini central bank. Moreover the hindrance of some customers for payment especially investment companies in addition to low liquidity in the interbank borrowing market (interbank market) reflected the same negative effect. This is due to the reticence of banks to provide liquidity for lending each other, which led the government and the Bahraini central bank to intervene in order to reduce these consequences by exceptional programs and incentives to overcome the crisis.

In light of what has been presented above, it can crystallize the problem of the study presented in the introduction. Looking for the answer to the following question, to what extend the various crisis impacts on the performance and the stability of Bahraini Islamic banks?

2. Starting from the hypothesis:

The nature of the work of Islamic banks in terms of their application to various foundations and control of Islamic economics, this has made the active banks in state of Bahrain far from the negative impact of the various crises.

The importance of the study is in the fact that the global financial crisis and the falling of oil prices in spite of their great negatives impacts. On one hand, It is a historical opportunity for the Islamic financial sector to prove its worth and success in facing such crisis. On the other hand, it shed light on the Islamic economy as a model for scientific and developmental alternative. It proves that it is able to compete with the capitalist theory at the international level and an active participation in proposing optimal solution to maintain the stability of the financial sector of any state.

The research aims to demonstrate the ability of the Islamic banking industry to adapt and keep pace with global developments, through its ability to overcome the various crises and its effectiveness in promoting the financial stability, and efficiency of the competition and excellence.

3. Methodology of the study:

We have relied in preparing this study on the descriptive and inductive approach through hypothesis testing. The analysis of the results concerning the performance of the Islamic banks and to what extent they are affected, comparing that with the conventional banks performance, during a period from 2005 until 2015, and then by selecting a sample containing a number of Islamic banks and conventional one, then studying the data for the period under study.

Through the collection of the data from the annual financial reports issued by the Bahraini banks, and published in their own sites and sites of trading as well as we have used reports issued by the central bank of Bahrain. The expansion of time has been chosen carefully for this study, which was eleven years. In order to be able to define clearly the basic indicators of the vulnerability of the banks under study, before the outbreak of the crisis, as well as during the crisis and post crisis.

In this research, we have used statistical analytical standards method where we have measured the financial stability of a group of banks for highlighting the general perception of the extent the immunity of each type (Traditional banks vs. Islamic ones). Towards various crises and reaching the desired goal, we have relied on Score financial stability account.

4. selected sample: It has 12 certified banks that were listed on the Bahrain stock exchange and made available by the data that have been showed in the study. Six (06) Islamic banks and six (06) traditional ones.

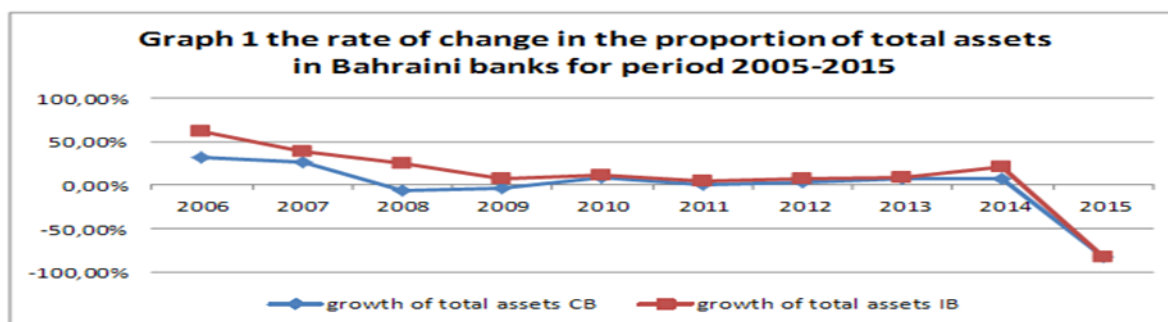
5. The impact of the global financial crisis of 2008 on the financial position and performance of the Bahraini banks for the period 2005-2015:

It has been relying on the analysis of the impact of the global financial crisis of 2008 on the financial position and performance of the Islamic banks and comparing conventional counterpart in the state of Bahrain on a set of information from financial statement (balance, income statement, cash flow statement). During the period from 2005 to 2015.

5.1. Comparison of the evolution of the financial situation of the conventional and Islamic banks in Bahrain for the period 2005 -2015

5.1.1. Evolution of the growth of total assets: include the cash money to the bank and those deposited with the central bank, as well as investments by the bank and loans granted, as well as fixed assets. They include all the bank's assets and all rights against others, which also represented different aspects of the uses of bank resources.

The indicator used to determine the efficiency of banks in maintaining their financial position. Banks vary in their abilities to increase their total assets from one bank to another. The increase in banks assets was of great significance to the bank's ability to grow and succeed. They also have an indicator of the extent of its ability to generate revenue. Because the growth in the assets does not increase in the volume of money that the bank can invest, but also increases the ability to invest in higher- yielding projects, which means that it's able to improve the quality of its investment, and this reflected directly on the bank's performance and excellence (Abbada, 2008, p. 19). We can view the changes in the average total assets for the banks of Bahrain in the following graph:



Source: prepared by the researchers based on the financial reports of the banks in the study sample.

We notice through the graph that the average assets size of sample traditional banks was always larger than the average assets size of Islamic banks in Bahrain, during the study period. This was due to the recent experience of Islamic banks compared to conventional banks in the region, which has a long history and large sizes, and it was a significant share of foreign investment in them.

However, the rate of change in the annual growth rate of total assets during the study phase shows us:

*Before the financial crisis or before 2007, the rate of change in the volume of assets in all the banks was positive because of strong economic expansion and higher government spending and the level of liquidity. However, it was bigger for the Islamic banks, with assets grew by 61.5 % during 2005-2006 while traditional banks assets grew by 31.7% that reflects the growing demand for Islamic banking services locally and internationally. It happened because Islamic banks are more compatible with the beliefs and needs of individual customers and companies such as deposits, financing and investments that have been adapted to conform to Islamic law. This growth showed between 2007 and 2009 i.e. during the period of financial crisis. We noticed the deterioration of changing the size of assets in the whole banking sector rate. This went back to affect all the banks due to the repercussions of the financial crisis, indirect effects of a decrease in asset and investment values and the loss of solvency of a number of clients. The reason was as most banks have suffered from a slowdown in financing growth, decrease economic and trade activities and a slowdown in projects that either postponed or cancelled. However, the severity of the crisis affecting the traditional banks, including the largest Islamic banks greatly because of the nature of the investment was risky ventures, dealing in derivatives that plunged in value since the beginning of the crisis.

* In the period between 2009 and 2014, we noticed the recovery of sector by an increase in the growth of the assets. This indicated that the banking sector returned to the starting point after a slowdown in growth during the crisis, as it took advantages of the banking sector as a whole and from the great support provided by the government, but the growth rate has not reached the level of growth compared to the growth level seen before the financial crisis. As we can observe that, the growth rate was lower in conventional banks (counterpart of the Islamic banks) because of the growing demand for banking products compliant with Islamic law, and the return of international banks confidence to the local Islamic banks.

* However, we note that in the years 2011 and 2012, there was deterioration in the change in the size of assets in the banking sector rate as a whole. This was due to the political unrest Bahrain (Arab spring). It had a big negative impact on a number of factors in the market such as the sector of services which has seen the cancellation of several events like the major event which was scheduled to be held in Bahrain (The car racing Formula 1). It also

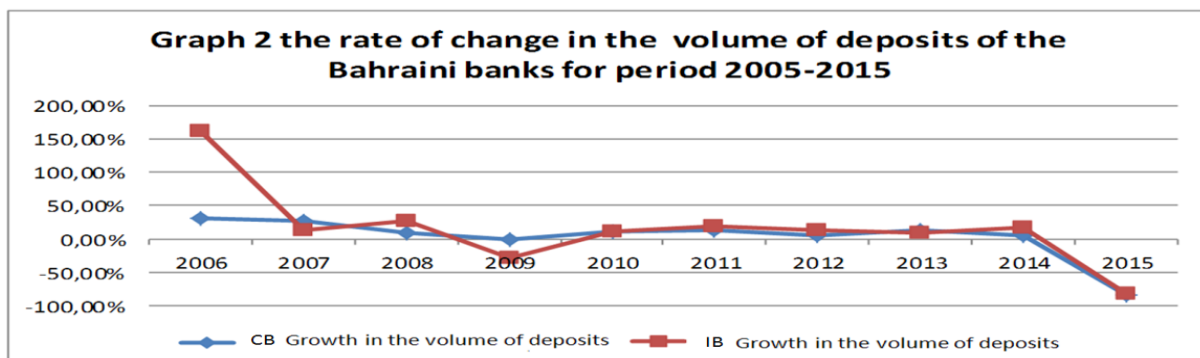
affected the tourism and hotel sector, which was the largest loss – making sector during the year 2011.

The reduced investments of all kinds flow to the Kingdom of Bahrain with an increase in the cost of borrowing as a result of the international market due to the downgrade rating of Bahrain’s sovereign from the rank A to BBB in the light of these political events. It affected the volume of assets and shook confidence in the financial sector of Bahrain, but the political situation improved with the end of 2012 returned to the banking sector activity also the rising of estates and stocks prices in the Gulf played an important role during this period (Oxford.B.G, 2012, p. 154). This helped the banks in their efforts to recover their loans, thanks to the rising value of security, thereby increasing the borrowing rate on one hand, and investing in international financial markets and estates projects on the other hand.

*In the last stage between 2014 and 2015, we noted a sharp decline in the rate of growth of the assets of all the banks following with the sharp decline in oil prices (from about 100 \$/barrel to less than 50\$/barrel). It led to a decline in the financial resources available to both Islamic and traditional banks, because of a relative decline in liquidity conditions and the global deterioration of asset quality in line with the economic slowdown. When remittance has fallen to Bahrain, it decreased foreign direct investment, which made up an important rate of the total net assets. Additionally, the rise of the value of the dollar reduced the value of the denominated assets in other foreign currencies such as EURO. All these activities led to poor trading of shares and a decline in valuation that also caused rise in borrowing costs banks and an increase of the negative speculations about the negative economic performance of various Gulf governments. The six Gulf corporation countries considered the owner of 29% of oil revenues in the world (Al-Masah.C.R, p. 2).

5.1.2 Growth in the volume of deposits: The deposits represent the main source of bank resources, but it is not the only source. There are other sources as the capital and retained earnings, loans and reserves. The deposits represent a support that enable the bank to meet the borrowing requests (finance) filed by customers. For that, there must be strategies for the development of these deposits, as one of the most important sources relied on the bank to finance its investment and do all the bank financial operations.

It represents the total customer deposits at the bank: deposits investment, savings, and current accounts. We can show the changes in the volume of deposits of the Bahraini banks in the following graph:



Source: prepared by the researchers based on the financial report of the banks in the study sample.

Through the graph we note that the total deposits of the conventional banks was greater than the total deposits of the Islamic banks during the study period, the fact that the Islamic banks are recent comparing with the conventional banks on one hand and in the foreign investments on the other hand. This led to deposit large amounts in the conventional banks.

In addition to the high return on bank deposits because banks need enough liquidity to enable them to lend in a period when there are high interest rates, which in turn enable the bank to reach record gains in revenue from interest on loans. However, the rates of change in the annual growth of total deposits ratio shows us the following:

*before the financial crisis the rates of change in the total deposits was positive, due to economic growth in the region during the years preceding the financial crisis, boosted by the rise of oil prices, and availability of liquidity in the credit markets. We notice also that the rate of change in the total deposits in the Islamic banks was superior. Despite their novelty, but they are able to attract financial savings in that period due to the high rates in conventional banks, which encouraged and increased in demand for its products and attracts many dealers and local and international capitals.

* but between 2007 and 2009 and with the beginning of the crisis we note a decline in the growth of the total deposits of each bank rates as a result of the repercussions of the crisis and its effects. The decline in bank foreign deposits and dwindling foreign investment in the region, which led to lower yields on deposits and the lack of investors willing to freeze their funds in exchange for a few returns and the search for new sources with good revenue .

* However, in 2009 we noted the superior growth of deposit rate in conventional banks than the Islamic banks where the traditional banks worked to attract depositors by increasing the interest on bank deposit rate to encourage them to deposit. After that, traditional banks use resources through their lending to the owners of projects and businesses with a higher interest rate than those paid by the lenders, which the Islamic banks cannot do. The fact that the return on deposits in the Islamic banks was due to the result of investing in projects and the majority of government deposits went towards traditional banks in order to protect the banking system which had lost confidence in it due to the financial crisis.

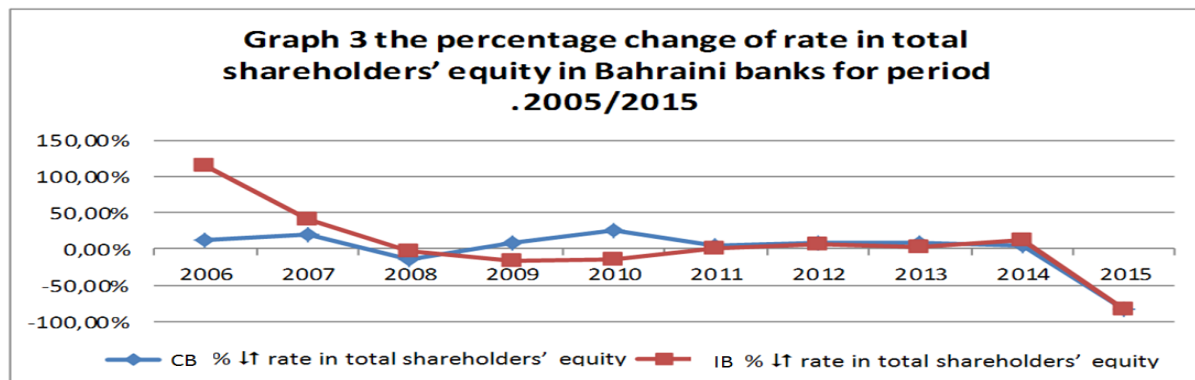
The central bank of Bahrain decided to out some of its deposits in foreign currency in some local banks to strengthen their liquidity and give support to them in these economic conditions.

*Between the years 2010-2012, we noted the return of growth in total deposits, but at a slower pace compared to the period before the crisis. Besides, the growth in the Islamic banks was better than in the traditional banks. This happened due to the hustle that the media have created locally and internationally about the ability of the Islamic banks being immune to the crisis, which has increased the confidence of depositors in their ability to manage their deposits. Still, the political conditions that Bahrain has experienced over the years 2011 and 2012 had a clear impact on the total deposits of the banking sector.

* The final 2012 – 2015, we observe excellence in total deposits growth rate among the Islamic banks compared with growth rate of deposits of conventional banks. We noted that the Islamic banks have succeeded in attracting more customers' deposits due to the good acquired reputation of the ideal financial stability, because of being immune to the global financial crisis, which was marked especially from the gains of oil and gas profits (which rose to more than a hundred of dollars for several consecutive years). These deposits were from the deposits of government funds or from the companies directly working in the domain such as the companies of oil and gas or companies that rely on the delivery of services to them. However, the decline in fuel prices especially since the month of June 2014 had negative impact on total deposits growth rate. The cause of the decline of the growth of bank deposits was attributed to lower yield rates on deposits and non – availability of enough liquidity and financial surpluses that investors were accustomed to obtain during the years that followed the crisis. The slowdown of government deposit growth, mainly influenced by the rising in government spending and the decrease in oil revenues and even

the private sector deposits also greatly influenced by the size of the projects entrusted to them to be executed for the government. Besides the government deposit growth influenced by the size of governmental oil revenues in addition to the anxiety felt by the depositors from outside the region. This required from the Islamic banks to maintain and attract more deposits by searching for the ways and the means to increase deposit that have an important role in the profitability of the bank to ensure the competition with conventional bank to attract deposits. The financial crisis represents an opportunity to prove the existence of Islamic banks and a big challenge to the Islamic banks.

5.1.3 Evolution of shareholders' equity: the shareholders equity is composed of paid up capital and the various capital reserves and the retained profits and premiums and this represents a standard measure of wealth institutions. It is possible to show the changes that happened on total shareholders' equity of Bahraini banks in the following graph:



Source: prepared by the researchers based on the financial report of the banks in the study sample.

Through the previous graph, we note that:

Before the crisis, the total shareholders' equity in the conventional and Islamic banks was increasing continually, but the size was larger in the conventional banks. It proves that we referred to it before about the history of the banks and the foreign effective contribution in them but the level of percentage change in shareholders' equity in Islamic banks was larger. In spite of the short experience compared with the conventional banks, the Islamic banks succeeded to attract many of the dealers and large capital at the local and global level and to increase the demand on its products. It was what they realized on the profitability level at the beginning of their career. During the crisis period, the Islamic banks were working to strengthen their capital bases to face their increasing size and activity.

* However, the financial crisis has affected banks of both types due to a decline in reserves and retained earnings because of dividends or an increased risk of non-payment allocations or lack of profits. It can also return the equity decline in foreign currencies taken into account either because of the contributions towards foreign company's losses or to keep financial accounts with foreign currencies (especially with the dollar). This later has known a sharp decline in the exchange rate due to the crisis.

* However, the fall of equity growth rate for the Islamic banks was more severe, in which the shareholders' equity growth rate for the Islamic banks faced a sharp and rapid fall, and they did not recover growth level even after the crisis. This was due to the effectiveness of the reserve of revaluation of the investments that was available for sale. These investments saw sharp decline during the previous period due to the global financial crisis that has deteriorated the values of the assets. As well, the retention of assets in kind in their budgets has exposed Islamic banks to the risk of low market value more than traditional banks has experienced. It led Islamic banks to devote an important part of their net income for the

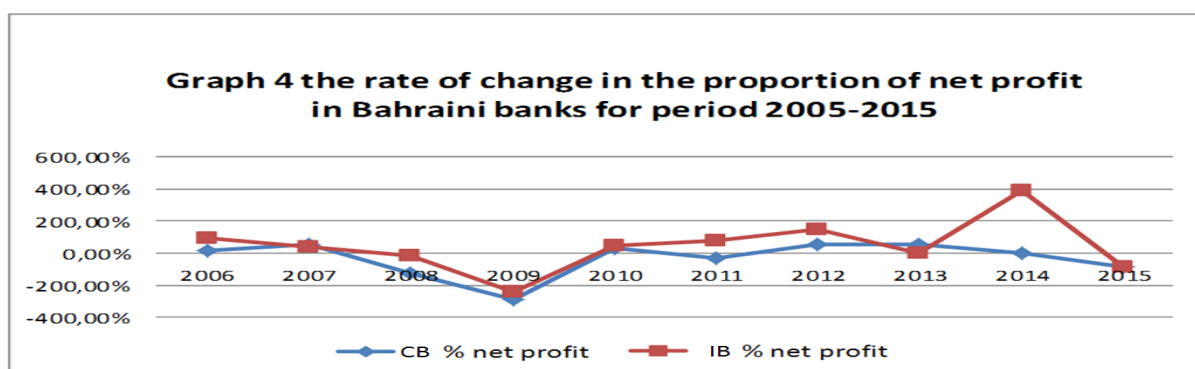
allocation of investment losses items and funding to cope with such kind of risks that was unique to traditional banks.

* The political conditions that Bahrain experienced between 2011 & 2012 affected the total shareholders' equity of conventional banks. However, after the improvement of political condition, they return to growth but a clear superiority in favor of Islamic banks due to the desire of the shareholders and owners of financial surpluses to keep the idea of Islamic banks.

* The decline of equity growth rate in 2014 was due to the impact of the crisis in the collapse of oil prices. Further the continued volatility in the stock markets, which attributed to the decline of government spending on one hand and on the other hand, some countries have decided to issue sovereign instruments in collaboration with banks, as in the case with Saudi Arabia that announced an austerity program expenditure and postponement of major government projects. This would lead to the decline in issuance of global Islamic bonds by 16% in the last period and this would lead the Islamic banks to rely on stock to raise the capital, but with the decline of the performance of total economy, which in its turn led to the downturn of Gulf financial market. Therefore, these factors led to harder compensate for the process of funding through shares, capital increase and the stakes of the shareholders. The gulf banks would intend to reduce the operating expenses, which were ballooned by the Islamic banks because of its superiority in passing the financial crisis and the policy of large expansion, which was followed at that time, by Islamic banks. It led to stop its expansion by embodying and restructuring some of them by closing their branches in some countries. The operations of restructuring the various Islamic banks carried out, whether overtly by changing the administrative staff or by doing the restructuring operations in secret. As it happened in some Bahraini and Emirates Islamic banks, that started the layoff of the surplus labor especially in areas where its operations have expanded so much, those layoffs included employees or the process that can transform their duties to someone else (Mokdadi, 2015).

5.1.4 net income: net income reflects the final profit before the distribution, shown by the income statement. It represents a financial profit made by the bank during the period; it also reflects the differences between the net sales and expenses of the bank.

we can view the changes in the net profit for the banks of Bahrain in the following graph:



Source: Prepared by the researchers based on the financial report of the banks in the study sample.

The graph allow us to prepare the following chart:

We note through the graph that the average net profit to traditional banks sample has always been more compared to the Islamic banks. This is due to the efficiency of conventional banks in the control and management of costs, while falling in the Islamic banks may be due to the lack of diversity of financing banking portfolio that the Islamic laws rule the available investment opportunities. However, by observing the change in net profit ratio rates, we note that the Islamic banks were better than the conventional banks in 2006, but the gap

decreased in 2007. The financial crisis exacerbated the decline between 2007 and 2009 for both types of banks. After seeing the financial reports of the banks sample, we found that in the year 2009, the profit of some Islamic banks have fallen like the “Alsalam” and the “Khaleji” commercial bank while other banks reported losses such as “the Gulf bank” due to increased provisions for finance losses and investment. It happened when the impact of the crisis moved to the real economy that had owned the budgets of these banks a large piece of them. However, for the case of conventional banks, seeing the performance of “Alahil Almotahid bank”, which was the largest in terms of market value. It has also seen a decline in net profit for the year 2009 with a rate of 21.5% while the net profit of Alkhalij conventional bank have declined to a rate of 88.65%.

As for the year 2011, the political unrest in Bahrain affected the net profit of traditional banks that fall by 33.65% compared to the previous year. In addition, we have noticed that with the relative recovery of the banking sector of Bahrain from the financial crisis and the improvement of political conditions. The Islamic banks have started to change their policy precautionary that has a positive impact on net revenue where they achieved the strongest performance during the last period, reaching the highest level in 2014. It was due to the issuance of the Bahraini central bank governmental “Islamic Ijara-Sukuk” on behalf of the government of the kingdom of Bahrain in January, 2014 of 250 billion\$, to be traded on the Bahrain stock securities, to reach the total value of instruments issued in Bahrain to 3335 billion US dollars (Alfakiri, 2015).

However, the drop in oil prices below 47% per barrel has caused a disaster for all the sectors mostly for the financial sector due to the drought and scarcity of funding sources and the decline in the net profits of each bank. These banks had the leading role in financing large government projects and focusing on the corporate sector invested in oil sector that inevitably caused a decline in deposits and available sources of funding and the decline of the profits of the companies that were financed by the banks, which affected negatively the profits of the banks especially the Islamic banks. As the sources of funding for the Islamic hospitals, hybrid instruments and others were not available in the Bahraini financial market. Moreover, the inflation of the operating costs due to the dynamics of domestic and regional expansion that have occurred to the Islamic banks after its success to overcome the obstacles of the financial crisis. It led to encourage the expectations for increase of growth of the activity of the Islamic banks where the growth rate of the Islamic banks in the GCC reached the proportion of 12.6% in 2014, outperforming the conventional banks that have seen a growth rate estimated at 9.6% according to the Standard and Poor’s report (S &P). The Islamic banks in the Gulf Cooperation council (GCC) decided to raise their balance sheets width with an average growth rate of 15.2% during the period from 2009 to 2014, while their conventional counterparts recorded in the Gulf region a rise of 8.8 % for the same period. The expansion in operating expenses was primarily to meet the expansion of operating new branches or enter into new markets and financing projects. On the other hand, it was not accompanied by an expansion in the sources of funding sources of the financial market (Mokdadi, 2015). It can also be noted that the decline of the growth rate in net profit for the Islamic banks in 2013 was mainly due to the background of the case of “Alcapita Islamic Bank^{*}”. It has declared the bankruptcy of its US branch and requested for protection

* Arcapita bank: is an Islamic investment bank in the Bahrain which has liquidity problems and declared bankrupt in the US in 2012, after failing to pay more than \$1.1bn of liabilities .The list of its creditors included Barclays plc ,RBS (the royal bank of

from creditors after it failed to reach an agreement to delay the payment of debts worth 1.1 billion \$ (Shehabi, 2014, p. 206).

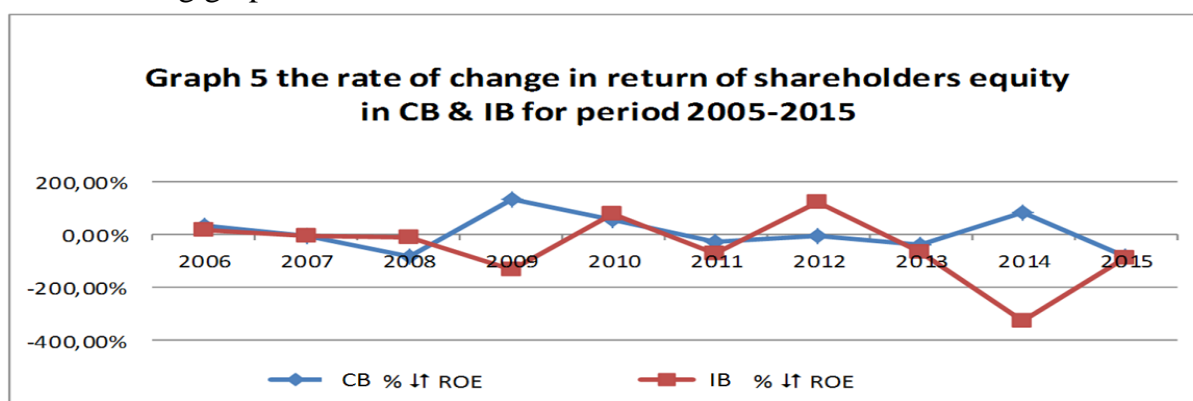
6. Comparison of the profitability indicators in the conventional and Islamic banks in Bahrain for the period 2005-2015:

The profits are the most important goals of the banks in general, because they are the source of confidence for the depositors and creditors as well as they enable the bank to increase its reserves and to face any expected losses. In addition to that, it is one of the means to increase the capital in banks. Therefore, it is one of the most important indicators and effectiveness of management.

There are many financial indicators used to measure the profitability of banks, and the most important of them are the following:

6.1 Return on equity: The return on equity (ROE) or return on equity index, or what is known as effectiveness of private funds, is one of the most important indicators. It is built based on the analyses of the performance of companies in general, and calculated by the quotient of net profit to total shareholders 'equity. ROE is of great importance to the existing shareholders and expected ones. It measures the turn achieved by the company to shareholders, also it plays an important role in the investment decisions for the owners of the shares. It expresses the rate of return on equity for unrealized profit per share of the bank capital. The index reflects the profitability achieved by the efficiency of the bank (Abidet, 2014, p. 12).

We can view the percentage change that happens in the return on equity for Bahrain banks in the following graph:



Source: Prepared by the researchers based on the financial reports of the banks in the study sample.

The yield to equity of conventional banks was better than Islamic banks during each study period except in 2008, which means that traditional banks are more profitable than Islamic banks. We also note that the rate of change in the yield to shareholders' equity decreased since 2006, but the financial crisis affected the rate of change in ROE (return on equity) which decreased its level at varying rate between the two types of banks. At the beginning, it influenced traditional banks more until the year 2008 then after that it affected mostly the Islamic banks. After that came the transfer of the crisis to the real sector. There were many reasons behind the sharpness in the low yield to shareholders' equity of the Islamic banks,

Scotland) and the standard chartered bank , in addition to the central bank of the Bahrain which represents one of largest creditors of the bank with an estimated sum of \$255 million ,so the Bahraini central bank has financed Arcapita bank by injecting more than 1/4 of a billion of dollars .Arcapita came out of the protection of chapter eleven in the us courts , which has resorted to prevent liquidation by the creditors with a restructuring plan .It is considered the first bank in the Middle East which apply for bankruptcy protection in the US According to the restructuring plan , it was expected that the unsecured creditors of the bank, including the central bank of Bahrain got 7.7% of the entitlement .

which increase the value of the provisions of the expected losses for financing operations and the appropriations of low financial value of investments (stock and other securities). It dates back especially to the lack of markets instruments and sufficient trading liquidity (the so-called market between the banks). It has led the Islamic banks to buy shares and securities sometimes, which may its market goes down in a short of time, as it happened during the crisis. Moreover, it also led to increase the appropriations of the low real estate investment value. We noted here that the nature of the legitimate Islamic banks obliges them to keep real estate assets or real estate funded through Ijara and ended with ownership. Such assets included in the balance sheet of those banks, which led to truncate portion of the income to serve as the potential to reduce market value of the real estate allocations. The traditional commercial banks do not maintain property within their budgets on the ground that the ownership of the property goes to the borrower even financed through leasing. In the sense that the Islamic banks have taken measures to strengthen liquidity on the expense of profitability for fear of the big risks, they may be faced to. In addition to that, the fear for the inflation of debts portfolio which Islamic banks doubted to collect. The decline in the yield-to-equity in the Islamic banks returns to the decrease in their investment activities, because of the crisis and the fall in banking services revenues, especially those related to the investment side, such as services credits and guarantees. The Islamic banks have followed some strategies to try to retain customers and attract others, starting from the year 2009, where they have provided the owners of the deposits in Islamic banks greater profits, which have led to the improvement of the situation in the following two-year (2010 – 2011). But in 2012 the situation came back to deteriorate due to that political events in the Bahrain followed by the crisis of Arcapita bank. In 2013 and 2014 in this period of time, all the economic changes were suitable due to the rise in oil prices in the international market and the overcome of the Bahrain political tremors.

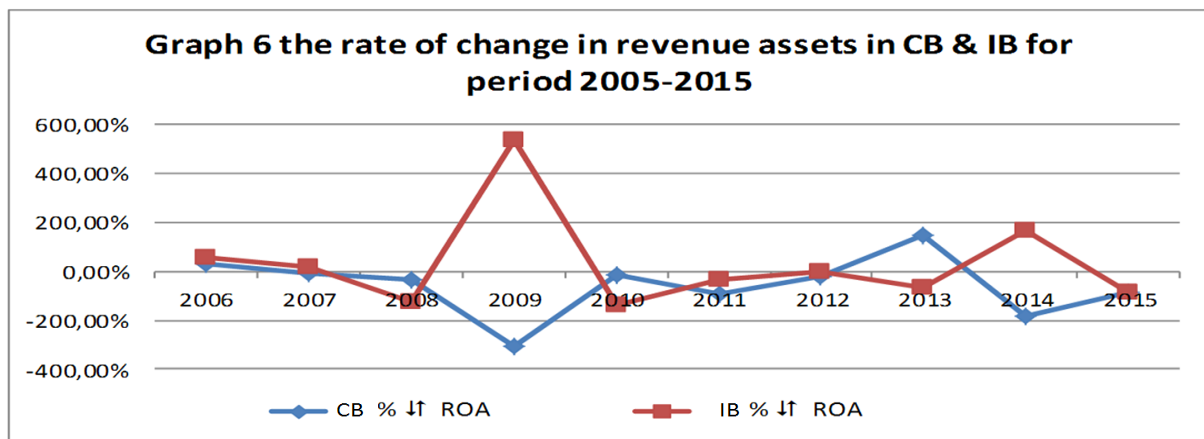
The event has led to a considerable growth in return to equity in the Islamic banks comparing this with the conventional banks and with high rate until 2015. However, the sharp decline in oil prices starting from June 2014 has led to a decline in the rate of return on equity for each bank, and the earnings of the banks.

6.2 Return on total assets: The ROA measures the rate of return and the effectiveness of the management in the use of available resources, their ability, and efficiency to general profits during a certain period. In other words, it shows that to what extent has the bank succeeded in investment asset that it owns and its efficiency towards a profitable directing opportunity of investments. It is a total measure that indicates the banks performance and its ability to realize revenues from all sources of financing in the property rights, deposits and other sources of funding.

The measures also include the impact of all the banks operational, financing and investment activities and its shows the profits generated from each dinar of the asset, the increase in the percentage indicates the efficiency of the policy of management in drawing, investing and financing the assets. The net profit to total assets measures the rate of return on total assets.

The financial and banking principles indicate that there is a direct correlation between the rate of return on assets and the degree of capital adequacy and vice versa.

We can view the percentage of changes that happen to return on asset for the Bahraini banks in the following graph:



Source: prepared by the researchers based on the financial reports of the banks in the study sample.

Through the graph, we note that the rate of change in the yield to total assets of the Islamic banks was better than the conventional banks from 2005 to 2008 and this was due to the lower cost of external funds in Islamic bank compared with all convention banks. The Islamic banks rely less on external funds compared to the conventional bank. Nevertheless, this rate has declined since 2006 and the decline has become sharp due to the financial crisis, which affected strongly in 2003 the return on asset in the Islamic banks until its recovery in the beginning of 2010, whereas remained well than the conventional banks growth rate until 2014.

In 2009, the conventional banks due to fear of bankruptcy have tried to attract and retain the biggest number of depositors by tempting to attract them through returns but this quickly vanished in the following year. It has begun in a gradual growth with the recovery from the financial crisis but the political conditions have influenced later.

The nature of the derived greatly influenced the return on total assets due to which we should look at the nature of the activities carried out by the banks, which generated incomes in addition to the nature and the distribution of the asset. These factors affected by the difference between the nature of the commercial Islamic banks business model and the nature of the conventional banking business model. The Islamic commercial banking served as the model of the work of Islamic banking. The Islamic commercial banks when they finance the assets with the Ijara ended with ownership form, for instance, they must function according to the Islamic laws, keep these assets within their balance sheet as an assets until it fully transferred to the owner of the funding as a donation or a sale with a low price.

Whereas the financing of leasing in the conventional banks, in the beginning the property devolves to the demander of the funding. It means that the property does not enter as an asset in kind in the traditional bank's balance sheet; therefore, the bank will not be susceptible to exposure to the risk of the decline in market value of the financed leasing properties. Maybe this example gives a simplified image of the reasons for the low net income of the Islamic commercial bank. They have been obliged to take large provisions to face the risk of low market value of the assets in kind and even to the owned finance.

On the other hand, the business model upon which the Islamic banks rely on in the management of assets and liability including the liquidity defers from the model of the conventional banks. Therefore the business of Islamic banks although accompanied the business model of the conventional banks in terms of the form, but the structural framework for those businesses remains ruled by the Islamic laws which is of entitlement. In the light of foregoing, financial crisis dramatically affected the yield of the Islamic commercial banks

assets and its economic impact due to the nature of the assets of these banks and their business model (A.R.I.F.C.F, 2010).

The return on assets index reflects the benefit of depositors on their deposits in the bank, while the return on equity index reflects the benefits of the owners of banks from their contribution in the founding of the bank. Thus, the crisis has affected the depositors of the Islamic banks more than the owners. In other words, the Islamic banks have turned the negative crisis effects to their depositors and have not bear only a small part of them while the conventional banks were not able to do so, because this issue corresponded with the nature of the work of both types of the banks.

The conventional banks have to pay the depositor's capitals as well as their benefits regardless the returns from their investments. This means that the conventional bank, if for some reason achieved less revenue than the total, interest that must be paid to the depositor's losses as in the financial crisis, it will have to pay the difference from the bank's capital, including reserves and retained earnings and shareholder's equity. Due to which the effects of the crisis has spread to the shareholders of the conventional banks so that it affects less their deposits.

The Islamic banks work on the principle of sharing profits and losses; this principle implies that the profits distributed to the depositors depend on the returns achieved by the bank from its investments, for as much as returns are depositors' profits. The Islamic bank is not obliged to pay a lump sum and predetermined amount, and if the bank has endured any loss, this loss is borne by the depositors because the relationship between the owner of the bank and depositors is a relation of speculation with the owner of the capital. The bank is the speculator and the speculator does not bear the loss if it happens. The loss is borne by the owner of the capital.

With the decline of oil prices, we noted decline in the rate of return on total assets in all the banks because the challenge of low liquidity in the market exists and has its effects on bank. It has represented in the decline in the growth of deposits and liquidity kind's ratios and therefore the continued decline in credit to the economy as a whole.

7. The measure of financial stability of the banks in the Bahrain for 2005 to 2015:

The stability of the financial system depends heavily on the health of the banking sector, and the last financial crisis has proved that. The infractions and the unrest caused by the banks reflected on the entire financial system and led to huge international losses. It can measure the durability and stability of the financial system for the banking sector using the variety of approaches and ways: Testing stress, the calculation of the value at risk, the form of the return on rate (RAROC), Altman model (Z-score). We have chosen this later to adopt in our study because considering its reputation as an important model for measuring the financial stability of the banks.

7.1 Definition of Altman model (Z-score):

Z-score is an essential variable, which depends on several independent variables to measure the likelihood of one bank to the risk of bankruptcy (individual risk bank). With time and frequent use, the standard has gained credibility in measuring the financial soundness of banks. The fame of this standard is due to the inverse association of the possibility of bankruptcy of the bank, which means that the possibility that the value of the bank's assets is less than the value of the debt owed to the bank. More the value of the z is big lesser the likelihood of facing bankruptcy and vice versa.

With time and frequent use the standards has gained fame and credibility in the field of financial safety measures. It has been developed to be applied also on the financial

institutions to become the best and the most powerful tools to measure the stability of the banks. The other tools measure mainly to which extent the bank can face the problem of liquidity whereas the credit model used to know whether the bank would face a situation of financial insolvency. We know that the financial insolvency is stronger and more dangerous than the liquidity crisis, because it means that the value of the bank's assets is less than its liabilities. It means that the bank is close to bankruptcy while the liquidity crisis may mean that the bank is not able to fulfill its obligations instantaneously at the lower costs. In this case, the bank might be forced to dispose of its assets under their real value, what makes it to face big losses but not to face the risk of bankruptcy (Altman, 2002, pp. 2-3).

The studies that have measured the effectiveness of the standard have shown that the accuracy of the prediction lies in between 72% to 80%, which is a good percentage in such models (Heine, 2000, p. 18).

Since 1980 the auditors, department of accountancy, have adopted the model and the data based systems to assess the status of bank loans.

One of the basic characteristics of this standard is its objectivity largely to measure the financial soundness of a group of different financial institutions. The objectivity of Z-score is derived from the fact that it focuses on the risks of insolvency or bankruptcy of any bank, whether it is commercial, Islamic, or other. It is linked to transverse possibility of insolvency of the bank, any possibility that the value of the bank's assets is less than the values of the debts owed to it. Concerning the banks, the (Z-score) standard is given as we give the formula of the Z-score index to the banks as the following (Boyd, Gianni, & Abu , 2006, p. 30):

$$Z = \frac{(K_{t,q} + U_{t,q})}{\delta_{t,q}}$$

$$U_{t,q} = STDEV \left(\frac{R}{A} \right)_{t,q}$$

$$U_{t,q} = \frac{R_t}{A}$$

$$K_{t,q} = \frac{E}{A}$$

Z: Express the value of the credit index of the financial stability.

E: Represent the shareholders' equity plus the financial reserves.

A: Represent the total assets.

δ: It represents the standard deviation of the returns on assets.

R: Represent the average return and calculated through four quarterly views for each year.

T: Is the time. **Q:** represent the bank.

7.2 The calculation of the values of the financial stability z- score index of the conventional and Islamic banks in the Bahrain for the period 2005-2015:

We divided the banks into large and small, depending on the size of the assets of these banks, we have considered every bank as large which has an average size of assets during the study period (11 years) one billion us dollars or more and less than that we have considered as small bank .

We can view the results obtained of the z-score index of the conventional and the Islamic banks in the Bahrain for the period 2005-2015 in the following table :

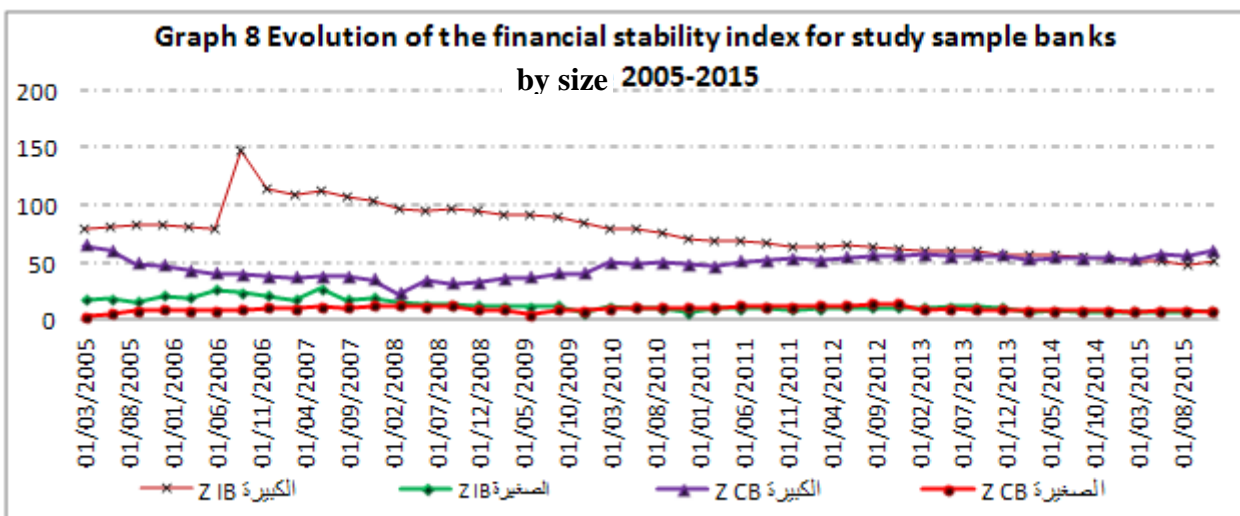
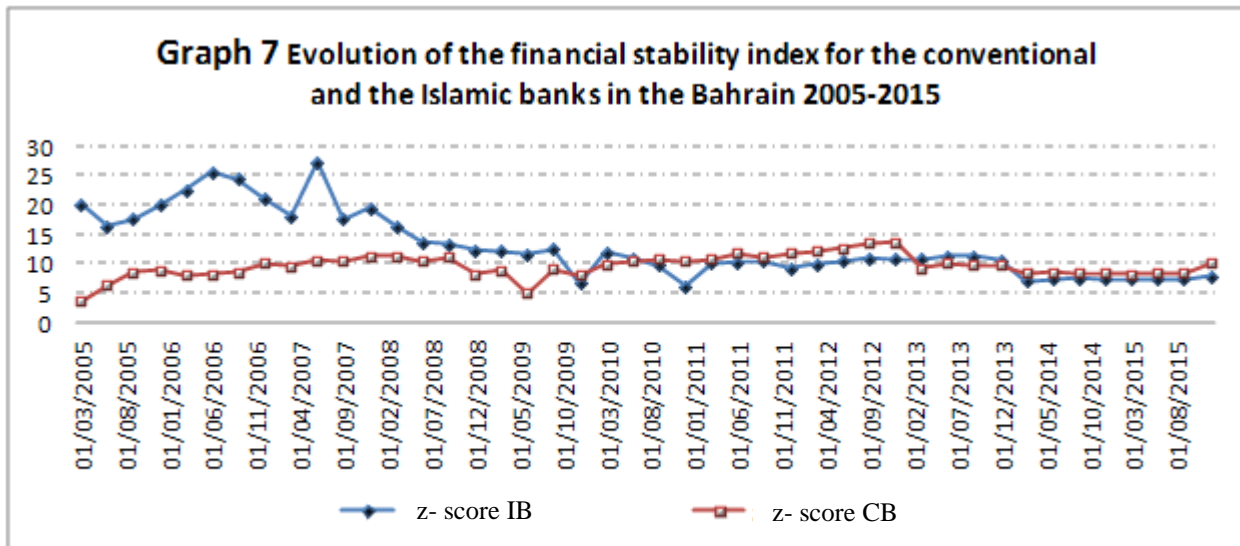
TABLE N° 02: Evolution of the financial stability index for the conventional and the Islamic banks in the Bahrain 2005-2015

Z score	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	\bar{x}
Z IB	18,06	23,63	20,50	13,86	10,62	9,64	9,91	10,43	10,92	7,23	7,45	12,93
Z CB	7,05	8,87	10,40	10,15	7,68	10,31	11,30	12,90	9,65	8,34	8,68	9,57

Z IB %	81,14	113,49	107,79	95,20	88,86	76,03	66,93	63,14	59,12	54,46	49,79	77,81
Z IB %	19,13	23,35	19,90	13,22	9,95	9,08	9,46	10,04	10,58	6,89	7,12	12,61
Z CB%	53,44	39,13	36,28	30,01	37,91	48,77	50,37	54,15	55,77	53,21	56,29	46,85
Z CB%	5,92	8,63	10,61	10,64	7,26	9,86	10,96	12,69	8,69	7,25	6,98	9,04

Source: prepared by the researchers.

The data of the table allows us to prepare the following graphs:



Source: prepared by the researchers.

Through the table, we can note that the arithmetic average of the index of the financial stability shows us that the Islamic banks are more stable than the conventional banks during the study period from 2005-2015, which confirms the validity of the principles that the Islamic financial industry is based on. It has many components that check its safety and reduce the risks, such as honesty, credibility, transparency, facilitation, corporation, integration, and solidarity.

When we observe the financial stability index for each year, we find that the Islamic banks were more stable before and during the financial crisis, in spite its negative affect all the banks being located in the same economic environment. The Islamic banks affect and are affected by the various developments that affect directly the economic atmosphere, mainly by the economic crisis.

There is a clear difference in the degree of vulnerability to the economic crisis. Banks that are dealing according to the Islamic laws remained at acceptable levels, despite the

repercussions of the global financial crisis, which means that the Islamic banks have better immunity to the financial crisis than the traditional ones. This vulnerability of traditional banks has led them to bankruptcy and huge financial losses for the majority of them. This is because Islamic banks are based on the principle of justice in its activities through joint tolerances for risk, as are profits and losses shared between the deposits and the owners of the bank. In addition, they do not deal in some fields where there are big financial risks like financial derivatives with high risks, as well as their carefulness to work and invest in the real economy. The Islamic bank retains the largest reserves in the form of capital and liquidity that would help them to face market risk and credit. The percentage of capital adequacy among the Islamic banks is higher in average than that in the conventional ones in the Bahrain.

The Islamic banks rely greatly on the deposits of individuals in their resources compared to conventional banks, which makes their funding resources more stable. Because what can happen from shocks in the assets or in investment can be absorbed in the liabilities, since the deposits are based on profit – sharing and the bank with a fixed return, apart from the actual results of the business in investment. This implies that the profits that are distributed to the depositors depend on the return achieved by the bank from its investments so as much as the returns the profits of the depositors are. The Islamic bank is not obliged to pay a predetermined amount. Even if they are losses the bank does not borne them but the depositors who borne them. Because the relationship between the owner of the bank and the depositors is a relation of speculation and the speculator does not bear the loss but the owner of the capital who bear it. In contrast, the nominal value of the deposits (liabilities) is fixed in the conventional banks, while it is not certain to recover all the loans on the assets side. Thus, any shock in the assets will lead to a contrariety between the assets and the liabilities. It is due to that the conventional banks are not able to absorb the shock at the liabilities level, because the deposits dragged them by a predetermined benefits regardless to the results achieved from the investments of the bank, which has led it to an inevitable crisis. However, in the Islamic banks, the nominal value of the investment deposits is not guaranteed and the shocks that the assets faced are absorbed immediately in the values of the investment deposits, which reduces the risk of the Islamic banks.

With the diversity in the liabilities and assets, the Islamic banks are closer to the comprehensive banks that accept deposits, grant funds, invest in equities and instruments, and provide services of insurance and brokerage and agency.

However, after the crisis we note that the stability in the traditional banks is more than it I tin the Islamic banks due to the increase in their provisions and the multiple measures taken by the traditional banks in order to restore the confidence in the traditional financial sector.

They have maintained a high capital and high liquidity ratios. The international financial crisis itself has imposed on the banks a new type of transactions and the precautions taken were based on securing the stability funding and the ability to deal with risks.

When the Bahraini political crisis has occurred, the banks were generally more or less ready. They have become more cautious in dealing and more selective.

They have worked on studying the risks better and there have been a lot of available of liquidity through large deposits in the central band from the surplus liquidity that they have. The Bahraini central bank has helped conventional the banks by directing part of its deposits to local commercial banks, to confirm its support and boost the levels of liquidity for them to reduce the impact of the crisis. These measures taken by the Bahraini central bank have facilitated the return of profitability for those banks faster than their counter parts. The stability of these banks in due to other factors, among them, the guff government's

investments which have reached 350 billion \$, which have eased the pressure on the banks of the region also the intervention of the central banks by lowering interest rates. For example, the central bank in the United Arab Emirates has reduced the interest rates from 3.5% in the first quarter of 2008 to 1.5% in the third quarter of 2009. Moreover, the Bahrain central bank has launched the idea of 30% as a maximum for investment in the real estate sector in 2008 after the arrival of crisis effects to the Gulf Cooperation Council countries (Shehabi, 2014, p. 171). This later has decided to reduce the lending rate and the repurchase rate (repo rates) by 125 and 25 basis point to close at 3.5 percent and 1.5 percent from 4.75 percent and 1.75 percent previously (CBB, 2008, p. 5). the Bahraini central bank has taken this move to increase liquidity and a reduce mitigate crude oil prices have rebounded to above 100 dollars per barrel, the flow out up of liquidity to the bank's balance sheets, both in direct or indirect image and this have accelerated the process of recovery.

We can also note that the fall of oil prices has maintained the stability of the banking sector at a low level. Relying on oil weather has made the financial system with all this sections to depend also on the public sector, which offers unconditional support to the parties of the financial system especially the local banks that reduced the incentives and penalties which represents the pillar of market discipline for the prevention from financial crises and to achieve the financial stability. The absence of market discipline has made the banks to rely on oil revenue that has reduced the financial stability of these banks.

Through TABLE N° 02 and the graph:

We find that the crisis has affected all banks of different sizes, but the small traditional banks were less stable throughout the study period. Their instability was mainly due to the nature of their work in financial derivate of high risk, in debts and the contribution to foreign companies that the financial crisis had a great impact on them in addition to their inability to the financial risk management. It happened due to either their lack of experience or the reduction in the provisions for finance and investments losses. In the second position came the small Islamic banks, which can return the cause of weakness of stability to inadequate allocations to cover the fallout or the secretions of the crisis. After the financial crisis, we have noted the financial stability and convergence of the small traditional banks in very low levels and affected neither by the political conditions nor by the fall of oil prices. It was due to the nature of their business, which focused on dealing with individuals and with limited financial transaction over shadowed the nature of guarantees and fewer risks because of the lessons learnt from the financial crisis crossed.

As can be seen clearly through the table and the graph outweigh the stability of the big Islamic banks compared to the small ones. This is primarily due to the large size of the bank supports its capabilities and possibilities in risk management because of a number of characteristics among then, we find the diversification in the portfolio. Adequate provisions to face potential danger, the size of guarantees and mortgages, adhere to international control standards; these have led to the reduction of the costs of the operations in light of economies of scale. In addition to that, the diversification of deposits base and increase and expand the scope of their deadlines, and expand the customers markets according to their depository and investments goals. In addition to that, they keep up with the requirements of updating of the technological technical and human infrastructure better than it is in the small banks.

The superiority of the large Islamic banks over the large conventional banks is mainly due to the nature of their work. It includes dependent in the operations of finance and investment on the sharing in the profit and loss between the banks and the customer away from the

harmful and malicious investment, factitious transactions of selling that do not own and trading with the debts.

They replaced the financial activity relationship of the loan relationship to a relation of participation and interest related to non-profit relationship. They also put multiple options for all customers according to their willingness to bear the risk. It included those who do not want to take a risk (acquire contracts offsets from urgent sales) and those who want to bear a margin of risk (acquire contracts offsets of term sale and sale of peace) and for those who want to bear risks to participate.

However, we noted the decline of that oil prices and the political condition experienced by the Bahrain have affected in the retreat of the financial stability of the large Islamic banks more than of the large conventional banks. This was especially because the large Islamic banks following crisis have expansion fever locally and regionally as it was centered expansion.

Mostly in assets facilities, employment and other, which increases the operating, costs of those banks without accompanying this expansion by an expansion in the sources of financing shoes operations? This means that the available sources of financing are limited, which are the public deposits and using shares to raise the capital or traditional instruments. With the deterioration of the political conditions and the decline in oil, earning fall down with the deposits and the available funding sources and retreated the profit of the companies that have Islamic banking financing which affected the financial stability.

We find that these banks were working to reduce the operating expenses, such as off stopping the expansion and requisition operations with the closing of branches in non-influential countries on the functioning of the global operations. As well as, these banks were increasing the restructuring operations either openly or in secret in some countries like UAE, Bahrain and Kuwait, and began to lay off company of the surplus labor especially in areas where their operations have expanded greatly. These layoffs have included the older employees or those that can transfer their duties to someone else.

8. Conclusion:

The study that we have made has concluded that Bahraini Islamic banks listed in the stock market were affected by the secretions of the global financial crisis of 2008 and the crisis of the fall of oil prices since June 2014 despite their commitment to the principles and the basics of the Islamic law. This has appeared clearly in a dramatic drop in the level of the growth and the development of its performance. But we have also noticed from the study that the Bahraini Islamic banks were less affected compared to the conventional counterparts, in the beginning, the negative effect of the financial crisis of 2008 was mostly limited to the conventional banks but soon moved to the Islamic banks. As for the decline in oil prices has affected all the banks at the same time and this was due to the damage of the Bahraini economy caused by the economic downturn that followed the global financial crisis and the fall of oil prices. The Bahraini Islamic banks were affected by the financial crisis for some seasons. Including with regard to channel through which these banks manage their actual investment was influenced by the local and global economic situation. As well as the limited available sources of funding, this may lead them to give up their privacy and financing characteristic of free interest and to seek to put money in similar ways of traditional financial that make them susceptible to all risks and problems facing the conventional financial system. At the end, we can summarize the different results and suggestions that our study has reached in the following points:

Despite of being more stable than the conventional banks, the Islamic banks are not immune to shocks and financial crises, especially when this goes later on beyond the financial

framework and passed on to the real sector. Therefore, it calls for more caution and requires more efforts to face the impact of the financial crisis. Hence, the Bahraini Islamic banks have to develop and build new strategies tools to manage the modern risks, which enable them to play the major roles both domestically and internationally in the field of insuring and promoting the financial stability and to hedge against the financial crises and prevent their repetition.

The need to urge and encourage the central banks in the Arab and Islamic countries to circulate the Islamic banking experience in the geographical regions and to abandon the usurious banking experience which was the cause of many financial crises.

To strengthen and activate the Islamic banking formats, which is now limited at best to apply only one or two formulas, even in the Islamic countries where each formula contributed to the stability and averts financial crises. Industrialization formula promotes the industrial sector, peace formula in the agricultural sector development and the formula of leasing contributes in the development of the service sector. As well as ensuring the reduction of the rush of some Islamic financial institutions to invest in the traditional like tools and avoid dealing in sham contracts and trend towards investment in real assets.

Diversification of the financing sources of the Islamic banks by attracting external sources such as sovereign funds in addition attracting the American and European pension funds and working on the marketing of the Islamic finance products to them, especially for the instruments. Keeping in mind with the need to insure the enactment of new legislations to facilitate the entry of those funds to the Arab financial market which enable the Islamic banks to introduce new and diverse Islamic financing products like Sukuk, with full commitments to the legitimacy control. Due to active role of these products in the development of various economic sectors, especially the troubled one that finally leads to the movement of wheel of the economic activity and gradually get riddance of the financial crises.

The care of the Islamic institutions and the Islamic banks to encourage the scientific ways of research in the Islamic finance and work on the adoption and application of the various results and recommendations of the conferences and scientific academies in the Islamic world and beyond. Moreover to ensure the holding of training courses to introduce the Islamic financial industry in order to seize the opportunities offered by the cracks that have appeared in the usurious prevailing economy, and carry a message of the ethical finance.

It later according to many specialists became the perfect tool to ease the effects of the financial crisis that has the global economy and has weakened many of the world's major institutions and companies.

To establish a free and independent Islamic financial market to the Islamic world, and encouraging the Islamic banks to merge among seeking them and activating the constructive cooperation between the Islamic financial institutions and the formation of effective economic groups among them to deal with the problems and the constraints of these institutions to be able to crisis management.

Acclimate the Islamic banks with the reality and follow effective methods and procedures to control the risks, which correspond to the nature of their activities, as well as looking for other ways to control these risks and lessen their effects in order to enable the Islamic banks to be the true alternative to the traditional banks.

Governments and the central banks have taken strategic decisions to support the Islamic financial institutions with the required surplus and doing grand industrial and agricultural projects to activate the market, to move the production and the consumption wheel. Also

seeking to diversify its sources of revenue and not rely on the exports, which exposed to fluctuations and the expansion of supporting and financing the small and medium enterprises. It raise the level of Arab economic corporation through co- financing of joint investment projects in the private and public sectors in order to increase economic growth and overall development.

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