

# The Role of Islamic Financial Engineering in Minimizing Global Financial Crises Results on Islamic Banking

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## Abstract

This study aims to examine the role of Islamic financial engineering in minimizing global financial crises results on Islamic Banking, researcher based on literature review and previous studies, reviewing financial crises events and analyzing the differences between traditional and Islamic operations banks, researcher showing many important results such as: Islamic financial engineering have positive role in minimizing crises effects, Islamic financial engineering depend on Islamic Rules during operations, so that researcher recommended that: If traditional banks want to avoid crises in future must follow Islamic financial rules.

## Chapter One Study background

### First: Introduction of study:

the observer of events will notice that God put enacted in the universe to attract livelihood and that taking this Sunan got the luck galore in livelihood, and laze and deficit did not take Sunan al-God in attracting livelihoods had a moment of livelihood little poverty remained a companion to him, Poverty overall appears in some communities is due to the failure of those communities to exploit its economic resources from the human being and the end of economic material resources, and the affliction that gets communities, is due to the violation of those communities to the ways of God in the universe, and the meditator in the course of the global economic crisis, including the global financial crisis, they will find the current man-made.

Therefore "a silver lining", while the world stop aghast in front of globalization and competition, now he stands more surprise in front of the enormous challenges created by the phenomenon of globalization, competition, and most recently the contemporary global financial and economic crisis, has become the world's largest banks threatened to slide into the abyss of default and financial hardship to reach some extent bankruptcy, and then what??

In light of what is witnessing the world of finance and economics from the negative repercussions and implications \_ contributed directly in Islamic finance emergence and rise of Islamic financial transactions, was the Islamic financial engineering become best alternative to minimize the repercussions of the crisis by adopting new strategies that enhance the ability to change and manage crisis, activate business ethics, social responsibility, and tighten controls in order to serve the Islamic banking away from the fiscal policies that rely interest rate.

Since the last four decades, the Islamic financial engineering follow indirect pace en route to the presence a well-established alternative to interest-based financial system, which took financial and economic system has been reeling heavier crises.

According This what makes Islamic financial industry more demanding today, more than ever, the effective development, clear and with a strategic long-term approach based on scientific and practical derived from the constants approach and in line with the existing investment nature on the basis of "alqanam Bilgaram" within halal circle, and this strategy requires an ongoing study the needs of local, regional and international market and the effects of economic crises on the life fields and work on the development of technical and technological styles were required, and to ensure the economic efficiency of financial products.

Islamic Financial Engineering role contribute in reducing the impact of the crisis, Islamic banking is required to establish clear foundations of Islamic financial industry independent of usurious financial industry, despite the fact that it would be more expensive than tradition and simulation, however, it is more rewarding and more productive, this hand. On the other hand, this would preserve the authenticity of Islamic financial institutions and help them avoid a lot of risk, it also allows them to take advantage of the current financial industry products, also it helps to complete the system's knowledge of the Islamic financial industry, giving it a greater capacity to provide services funding and other more professional and high credibility. the global economy faced one of the most difficult crisis in modern history, as it had to bear at the same repercussions persistent global financial crisis, which quickly turned into an economic crisis have had a negative impact on the different countries of the world and sectors of the global economy repercussions, and these sectors banking sector.

Really banks are affected by these events, this and point out that the banking sector is considered the dividing line which reveals the reality of the economic and financial stability in any economy or not.

There is no doubt that Islamic banks are not immune to the repercussions of the global financial crisis, because many of them linked to financial dealings with international banks suffering from credit crisis, and

recession, which affects the global economy have negative impact on Islamic banking and usury alike.

It must be, the impact of the crisis on all components of the economic arena, particularly in the presence of a single-controlled economic system on the market, and direct without being shared by his competitor in economic battle.

The researcher shows that Islamic banks are not immune to this crisis so vulnerable that Islamic banks do not operate in an isolated from the rest of the world, disconnected islands, but are part of the global financial system affect and affected by what is happening in the world.

Hence the importance of financial engineering as appropriate tool to find innovative solutions and new financial instruments combining religion Shara routers and considerations of economic efficiency. In this particular period in which the world has witnessed enormous dramatic changes was the change of economic resources management style to a free economic pattern, as well as the interdependence of international funding markets by the ICT revolution, it imposes competitive pressure sharp disproportionate for Islamic Financial Institutions, particularly in the funding markets, banking and financial services. These calls necessarily develop innovative Islamic financial products to ensure that institutions deal of flexibility and a share logistically abundant help her to continue effectively.

Through what is shown above, the importance of "the role of Islamic financial engineering in reducing the repercussions of the financial crisis on Islamic banking" as a guide and assistant for Islamic financial banks to limit the fallout from the global financial crises, which are an obstacle to achieving the banks of the goals expected of them achieved, and the Islamic financial engineering to give the administration the substantive justification for modifying policies and strategies for banks in the public interest for the banks.

In summary, it is seen to Islamic financial engineering from the perspective of the large and effective impact on the quality of the performance of Islamic banks, this investment become more valuable, such investments directly affect the delivery of services to customers, and thus received acceptance for customers.

In this sense, this study, based on the identification of "the role of Islamic financial engineering in reducing the repercussions of the financial crisis on Islamic banking," It is hoped that this study provides feedback for everyone interested in this topic, as is expected from the study to build basic pillars contemplates taken into account when adopting or building-related policies banks.

### **Second: The importance of the study:**

What theoretical literature raised on the repercussions of the financial and economic crisis contemporary sparse still beset by studies from the reality of the current situation in light of the increasing pace of the global financial crisis and its impact on the global economy fields. Islamic banking formulates strategies and plans of financial engineering to avoid the effects of the global financial crisis in the Islamic financing issues.

The Islamic banking has become one of the economic doctrines that looks of it and sees the world they swing and the savior of the global economy, which suffers the ravages of the losses and damages, and they excelled during the crisis on the capitalist doctrine that could not resistance and withstand the crisis and almost caused the socialist system, which fell out of the past, The global financial crisis has made the global Islamic banking intervene advanced economic area..

The main importance of this study by identifying the roles hopefully be carried out by Islamic financial engineering in reducing the repercussions of the financial crisis on Islamic banking.

As The importance of this study through a set of interrelated issues or considerations, and we can define these considerations in the following points:

- 1-Posed importance to identify the role played by the Islamic financial engineering in the identification of the crisis before they happen and if they happen to identify the right solutions and effective in resolving this crisis.
- 2-The need for attention and guided Islamic financial engineering in Islamic banks, insurance and appropriate environment for the advancement of their Highnesses.
- 3-This study sheds light on the subject (the role of Islamic financial engineering in reducing the repercussions of the financial crisis on Islamic banking.)
- 4-It is hoped that this study provides feedback to those in charge and those interested.
- 5- The importance of this study comes of interest to the relevant organizations. When recognize the basic principles and foundations of the subject, these organizations strategies and policies for the development of more effective to focus on it.

### **Third, the problem of the study**

Due to Islamic banks is part of the global banking system through different investment and funding criteria in riba-based banks, the Islamic banking even though they least affected, but they are more or less affected by the repercussions of the global financial crisis.

Therefore arise during the study the problem of identifying "the role of Islamic financial engineering in reducing the repercussions of the financial crisis on Islamic banking", on the one hand. On the other hand, the

researcher is trying to demonstrate the positive repercussions as a result of the adoption of financial engineering to Islamic banks.

The problem can be summarized in the study by answering the following questions:

- 1- The importance of adopting the role of Islamic financial engineering in reducing the repercussions of the financial crisis on Islamic banking?
- 2- positive shocks due to the adoption of the principles of Islamic financial engineering to Islamic banking?

#### **Fourth: The objectives of the study:**

The present study aims to try to identify the "role of Islamic financial engineering in reducing the repercussions of the financial crisis on Islamic banking", "emerges as the main objective for the following sub-objectives:

- 1- Scientific rooting of "the role of Islamic financial engineering in reducing the repercussions of the financial crisis on Islamic banking.
- 2- Identify the role was played by the Islamic financial engineering in reducing the repercussions of the financial crisis on Islamic banking.
- 3- Summarizing suggestions and recommendations that contribute to enrichment of the subject, as well as knowledge of the basic pillars that represent the cornerstone of starting other similar studies.
- 4- It is the scarcity of Arabic studies on this subject, according researcher this study is considered - one of the first studies, which become support of other similar studies.

#### **Fifth: the determinants of the study:**

The most important obstacles faced by the researcher during the preparation of this study is limited administrative resources and the literature in this area and in particular in the literature of the Arab administration.

The scarcity of studies and references relevant to study subject, so the researcher pay additional efforts in order to obtain information for the purposes of the study.

#### **Sixth: The methodology of the study:**

This study will be based on the descriptive approach through the researcher to return books and periodicals relevant, and will depend on the comparative approach by comparing the Islamic banking approach and other approaches situation.

#### **Seventh: study questions:**

This study is based on the following questions:

- 1- What are the roles was played by the Islamic financial engineering to reduce the repercussions of the financial crisis in the Islamic banking?
- 2- What are the obstacles to the application of Islamic financial engineering?
- 3- What are the basic principles and foundations of Islamic financial engineering?

**Eighth: study definitions:**  
Islamic financial engineering: the range of activities that include design, development and implementation each of the tools and processes and innovative financial operations in addition to formulation innovative solutions to the problems of funding and all in regarding to religion Shara principles.

**Crisis:** It displays individual or group or organizations or communities to sensitive and critical and painful positions and intensify the pain that we ignore and we neglect these warnings and signals associated may result from negligence risk,. The crisis is the final result of the accumulation of a series of impacts or a sudden defect affects the key ingredient of the system and constitutes a clear and explicit threat to the survival of the organization or the system itself. (Abboa, Zaid, 2006: 22)

**Islamic banks:** financial institutions as the banking and investment business according to Islamic investment formulas will also provide social services related to banking and work according to the requirements of the Islamic Sharia (Alzerry, Abdul Nafii .2001: 11).

#### **Ninth: data sources**

The researcher conducted a comprehensive survey of books and periodicals, studies of Arab and foreign in the field of the subject of the study, in addition to the return of books, articles and statistics and everything related to this subject, to lay the scientific foundations and theoretical framework for this study.

#### **Tenth: Previous studies:**

Many studies in all countries of the world looked at the subject of financial crises and their impact on the banking reality, but it is not reached to studies on the variables of the study combined - within the limits of science researcher - hence the importance of this study, and in order to achieve the goals of the study felt researcher divided this study into two groups:

Jabr,( 1999) conducted a study entitled (crisis management, comparison look between Islamic model and Japanese model), researcher show that he should be recognized that today's world is a world of crisis due to many reasons related to many changes that have occurred in the areas of political, economic, demographic and environmental life, and that influenced the human life inside social and organizational entity as affected countries and international organizations and relations together, the healthier it is known that the great challenge facing individuals, organizations and nations is determined by a series of crises that differ in nature, size and worlds agitated, leading to the creation of the difficulties and problems and bring about the collapse in values, beliefs and property, so the face of crises and awareness is essential to avoid further material and moral losses and this is not only establishing appropriate scientific management approach to crisis management. This study focused on the comparison between the two nations: the Islamic and Japanese in the field of crisis management, which manifested itself in two models each with his ways and methods in dealing with crises and how to solve them.

According to massadi (2006) entitled: (the severity of the impact of crises and its impact on the banking sector in Jordan ", where this study aimed to identify the impact of crises on banks in Jordan. At the end of the study, the study concluded that a set of recommendations was that banks operating in Jordan susceptible to internal and external crises together. as well as with Jordanian nationality banks more vulnerable than non-Jordanian banks to crises and private technical crisis affects all total assets and equity ratio to deposits in banks in Jordan on the severity of the impact of the crises of various kinds on those banks and their implications, where they found the researcher that an increase in total assets to increase shareholders' equity to deposits ratio factors which increase the ability of banks to survive and continue to lead towards reducing the severity of the impact of the crises of various kinds.

Also in althaher et al (2008) conducted a study aimed at identifying the problems and crises of export credits at banks Alordnah.aam, 2008, as well as this study aimed to identify the problems and crises of export credits in Jordanian banks and to identify the relationship problems of exchange-sized ( large, medium, or small) as well as to identify the relationship of these kind of problems the bank (Islamic or traditional). To achieve the goals of research questionnaire was designed and distributed to 16 banks and the number of distributed questionnaires (175) identification of suitable distributed with the number of bank branches has been restored (149) questionnaire are analyzing an average of 85.1% in response. As and conducted statistical tests required confidence level (95 %) to achieve the objectives of the study and the results showed the presence of five problems in the export out of credits (22) initial problem has been studied and is five problems: the client does not know the customs consolidated for Documentary Credits, and the lack of an automated system full documentary of credits received, and the difficulty of preparation of the documents required by the customers, and the customers not able to English, the main language used in export credits, and the presence of errors in documents required for adoption. And no statistically significant differences between the different-sized banks in the five problems only show while also showing a statistically significant differences between Islamic and conventional banks in one problem differences.

In Abdul Ghafar Ismail(2007) study the new financial innovations Islamic financial systems, in particular the role of Islamic financial engineering in reducing the impact of the global financial crisis, the study showed that the Islamic financial system has financial innovations, have contributed to the reduction of the consequences of this crisis on Islamic financial banks, has this study in order to try to identify these financial innovations in order to be adopted by other banks. The study also showed that he can take advantage of Islamic banks through the new financial innovations through liquidity management and risk-sharing, and income generation, and many financial experts try to take advantage of the Islamic banking system because of the financial innovations of this system. However to examine the financial crises and Islamic banks Clancy Yeates (2008) conducted a study on the impact of the global financial crisis on Islamic banks, the study showed that the Islamic banking system, which is based on clinging to the foundations and principles of Islamic law, is thus prohibited any kind of speculation, and interest charges, and is prohibited as well as investments in (unethical places as night clubs), and the Bank access to profit by buying assets on behalf of clients, which in turn practical repay the loan and pay a fee for the use of assets, and the ownership of the asset transfer to the borrower, and the financing of a major project, it looks basic facial to a degree risks, so does the Islamic banking system to avoid the risk of a very large investment, so it is one of the fundamental characteristics of Islamic banking.

Abul Hassan,( 2008) study conduct "the global financial crisis and Islamic banking services", as the study showed that the capitalist system has proved fragile in front of the challenges of the food crisis and the oil crisis and the economic crisis, this study has demonstrated to a combination of factors that contributed to the exacerbation of the global crisis, The study also showed that the Islamic economic system can help to achieve the stability that the world needs. The study has shown that the financial crisis that financial strength is a fake power, and was accompanied by the financial crisis as well as rising inflation, and increasing demand for oil and food, prompting prices to rise at a global level, has many economic experts in the capitalist system deficit, and the Islamic financial system has proved its efficiency the reduction of the high risk of this financial crisis, the

study showed that the capitalist and socialist system support Islamic regime in encouraging people to work and be a productive worker and earns as much as it can, and must abandon the excessive greed and love for money.

A. Prasad and C. Panduranga Reddy,( 2009)) study aimed to recognizing the "impact of world financial crisis on India , specifically on the Indian banks," the study shows that the global financial crisis originated in the United States, when the banks providing loans Finance and facilities for loans for housing, on the assumption that housing prices will continue to rise, and through these financial instruments and obligations were sold to investors all over the world, and resulted in higher interest rates to decline in house prices in 2006, which led to the mortgage cannot be unsustainable and led to a tumble in payments, and therefore housing prices fell in an incredible way, the study shows that the main underlying causes about this crisis is the boom in the housing market, and speculative, high risk in mortgages and lending, as the study shows that almost all countries in the world affected by this crisis including India including financial banks, as the study showed that the banking sector is the most affected in India more than other economic sectors.

The study of Alasrag, Hussien, ( 2009) try to examine "the global financial crisis on the Egyptian banking industry impact." The study showed that the global financial and economic crisis has hit the US economy and spread to the European and Japanese economy, began its negative effects are reflected on all countries of the world and as much openness each of them and its integration into the global economy, this study showed that the Egyptian economy and in particular the banking sector affected by this crisis dramatically, the study showed that the Egyptian government has developed a number of policies needed to address the dangers of this crisis and procedures, because the Egyptian economy depends mainly on abroad, the study concluded that the development of a number of recommendations and suggestions in order to recover from this crisis, Among these recommendations Egyptian banks need infrastructure for development the banking industry for the owners of expertise and efficiency to support the industry and attention to modernization of the banking industry software programs. The study also showed the need for Egyptian infrastructure to developing the banking industry by relying on an experienced and efficiency to support the industry.

Finally Chan-Lau, Jorge A, (2010) conduct a study aimed to recognize the "impact of the global financial crisis on the Chilean banking system", as this study has shown that this global financial crisis has affected the operating in Chile banks mainly and especially the investment risk degree, this study has proposed a set of guidelines and the proposed aid that supports and support the banking system in the Chilean state, and this study was based on the identification of the amount of risk in the payment to the banks, and the comparing that between Chilean banks and international financial institutions, has The study concluded that the entire banking system significantly affected by this crisis, and to evaluate the study concluded inter measures undertaken by the government in order to reduce systemic risk in the banking sector, and has also proposed an increase capabilities and asset allocations of funds in local banks.

## **Chapter II Literature of study**

### **Introduction:**

Through Literature researcher will define the global financial crisis in terms of the essence and effects and find out the real reasons for their occurrence. Researcher will also talk about the Islamic financial banks and the role of financial engineering in reducing crises.

Therefore, the researcher will be divided this chapter into two sections, which are as follows:

### **First topic: the nature of the financial crisis**

The second topic: the nature of Islamic banks and financial engineering: First topic: the nature of the financial crisis

No doubt the capitalist system not survive of crisis until enter into another crisis ,the economy fast spidery fast deployment of collapse, and the capitalist system history tells that the facts and figures, it is a continuous crises and frequent system, was the senior Westerner economist admitted under the crisis that the crises of the economy of the capitalist economy , also acknowledged that the capitalist economy in a dummy economy in which (98%) of the money is not offset by physical assets and (2%) of the money is matched by physical assets, and represents the real economy and the paradox that the global crisis pudenda capitalist system appears, it has shown The current crisis that debt banking systems in Western countries than the size of the national product to those far countries, and the best example of this is what has happened in the State of K (Iceland), where on the verge of bankruptcy crisis has shown that the Icelandic banking system's debt volume of nearly 100 trillion while size national product nearly 20 trillion just, faithful see where he came from this difference that exceeds five times the Icelandic national product, he in fact represents the imaginary economy, the bubble economy (Dagi, Ali, 2001: 30)

Second, definition of the financial crisis:

Numerous definitions of financial crises multiplicity of reasons for the emergence and markets in which it arises type (financial or cash or goods or services) markets, and the type of sectors in which they arise (industrial, commercial, services, or software or government sector or the private sector), and certainly in all crises they

often arise in a given market and spread to other markets and established in a particular sector and extend to other sectors and arise in the state and extend to other countries and that happens for a variety of reasons, most notably:

- 1-the sovereignty of the capitalist system based on the unrestrained economic freedom (freedom without restrictions), based on the economic principle (*laissez-faire*. *Laissez passé* ).
- 2-speculative financial investments and private speculation in the financial markets and the stock market and real estate speculation, which is one of the most important speculation at the moment.
- 3-spread speculation in financial derivatives and futures contracts, but should this attribute is a feature of financial investments at the present time, and this type of investment is fast growing and fast collapsed.
- 4-an enormous cash blocks poured into the international banks, especially European ones, and the US, especially after the rise in oil prices and the work of recycling of funds oil-producing countries - particularly in the Gulf states – to European financial and monetary markets and the US, and the sovereign funds of funds the best proof of that, banks was unable to invest in real sector, directing toward speculation and private real estate speculation, which had an impact on the crisis.
- 5- US successive governments spending, adding to the US budget deficit, and private military spending after the events of September 11, 2001 m, which added a huge cash flows to financial and monetary markets. (Dagi, Ali, 2001: 32)

As mentioned above not easy to find inclusive definition of the current global financial crisis, but we will try and touch some definitions Maybe it presents to us the definition reflects the nature of this problem, these definitions of the following:

- 1- Sudden drop in physical prices asset, as happened in this crisis where real estate asset prices fell and fell on their impact stock and bond prices in the US stock markets and then moved to global stock markets.
- 2-low demand for goods and services, and then low prices and growing unemployment rate and then the crisis moved to the stock market, and from there to the rest of the market, has said economic history that the basis of 1929 m is overproduction and then increase the offer, which was not offset by request by the same percentage.
- 3-sudden rise in asset prices as a result of successive speculation degree higher than the actual value, which leads to lower yields of those assets, and then began Buyers Disposal exerting downward pressure on selling prices, and reduced accordingly prices of shares and bonds on the stock market.
- 4- major debtor or group of debtors inability to meet their obligations of banks and other financial institutions, as happened in Dubai crisis where Dubai World was unable to meet its obligations towards its creditors The cause of this crisis in the domestic and international stock exchanges.

Third, the main causes of the current global financial crisis:

Yusuf, Muhammad (.2009: p S1-2) Shows that the main underlying causes of the financial crisis that affected the whole world, are as follows:

1-US financial situation since 2000, there have been frequent events set during 2000.2001 formed a driving point of this crisis are:

A. industrial and stock software crisis shares in 2000 -2001.

B.the events of September 11, 2001, and what the resulting and economic effects, including the economic recession that prevailed in the United States after the crisis, and the United States attempt to revive the US economy.

C.the desire of the United States out of the crisis where encouraged to increase the granting of credit to the real estate sector to revive the economy, lowered interest rates to their lowest level on that date about (1%) and established two institutions to buy mortgages (Fannie Mae, Freddie Mac) were mission buy mortgages from banks and this helped in the emergence of two things:

-banks follow to increase mortgage to ensure that mortgage real estate. -Helping banks in reducing the burden of non-performing mortgages.

2-As a result of the low interest rates during 2000-2001, increased demand for real estate investment and increased real estate speculation and fueling the rise in property prices, revenues do not cover their costs, delinquencies and defaults increasing during the period and 2002-2006, the banks seizure a private mortgages 2007, and 2008 .

3-The exchange rate turbulence in international markets, and rising strategic commodities such as oil, food commodities, especially wheat, sugar, prices of industrial commodities such as iron and cement, the price of gold, but that oil prices reached at the beginning of September 2008 to (147) dollar and is the highest price reached.

4-portfolio credit ratings erroneous by international rating institutions, and thus many financial institutions weakened and banks to comply with the granting of credit standards, and so it was the outcome of the crisis to take strict action against institutions that weakened in standards of bank credit granted, but that conferences and seminars held after the crisis were unanimous on two things, namely:

A. The crisis was the result of errors committed by the banking leaders within the banking system, especially in the United States of America.

B) it is necessary to take strict control measures on bank operations, and focus on the application of the rules of good governance.

5-In December 2007, a major group of banks(UBS, HSBC, PARKLIS) announced that for a significant drop in share prices on the stock market because of the mortgage crisis, and the result that the US Federal Bank in January of 2008 to reduce interest rate by three-quarters of point (4.25%) to (3.5%), and then fell to 2% in February, and in the same month, the British government nationalized bank (Northern Rock).

6- Many US real estate companies suspended operations especially mortgage companies and other declared bankrupt, and others are offering for sale during 2006 -2007, and large companies that declared bankruptcy Inc. (Hom Murtingeng Investment).

7-At the beginning of 2008 there were signs of the crisis clearly shown, where central banks in Europe and the United States address the problems that have emerged in the loan market and encouraging strong banks to buy endangered banks bankruptcy with the support of central banks, where it encouraged the US Federal Bank and the Ministry of US Treasury Bank (JP Morgan Chase) to purchase of American Business Bank (Bear Sains) at a price low to keep of bankruptcy.

8-In front of these successive events and the large number of mortgages that have entered into default, the institutions of the mortgage which affected, that US government has been set up to buy mortgages from real estate companies and banks (Fanny Mann, and Verdi Mac) US Treasury Department on September 7, 2008 arose by placing them under guardianship and re structure, and ensure their debts in the level of 200 billion dollars, and this procedure has been the first measure aimed at preventing the crisis.

9-in September 15 Business Bank (Lehman Brothers) admitted to declare bankruptcy, and at the same time the bank announced (Bank of America) buy another bank for business (Merrill Lynch) bank, in the next day the US government nationalized the largest US insurance group (AIG), by (10%) of its capital and granted (85) billion dollars.

10-in September 16 stock markets conditions deteriorated within the United States, and deterioration also began sweeping the global stock markets, especially European stock exchanges, and at this moment exposed to the world scale of the disaster, and the world's central banks and governments began looking for solutions, and as soon as was invited to hold an international conference in Paris to discuss the crisis.

Through previous discussion the researcher known that the crises were not the result of a moment of eruption, but are in fact the product of previous crises consecutive accumulated led to a crisis on the shape and size.

#### **Fourth: the effects of current global financial crisis:**

The Council of Saudi Chambers of Commerce (2008: p. 4) explain that the most prominent effects brought about the crisis were as follows:

1-The first spark that ignited the crisis is the recognition of (Lehman Brothers) bank bankrupt, but the news has led to the collapse of the stock exchanges, during the first five days period became irregular after the crisis, and some bourses lost about 40% of their value, and some economists said that if The comparison between the effects of 1929 crisis and the crisis of 2008, we find that the 1929 was nothing as 2008, no less a joke and nothing more.

2-The collapse of a large group of banks that were given by rating agencies high rated, has collapsed (25) bank in the United States during the last quarter of 2008 and 140 banks in 2009 and 30 banks until mid-March 2010.

3-bank customers falter, withdraw their deposits from banks, affecting the size of bank assets, which governments were forced to intervene to inject billions of dollars in loans to banks to meet the withdrawal requests by customers, for example, has pumped US \$ 700 billion to the coffers of banks, and Britain has pumped nearly (450) billion, and governments have varied in size from what safeguarded funds in the banking systems, but it certainly has pumped a lot of money.

4- the low interest rates to their lowest level. For example, the US Federal Reserve cut interest rates for interbank lending to (0.2%) and the Bank of Japan cut interest rates to 0.3%, and the Bank of England cut interest rates to (0.75 %), and it noted that the first action taken by central banks in the world to respond to the crisis is to reduce interest rates to close to zero, and is the same as the procedure demanded by the Lord (John Maynard kynez) and the Minister of the British Treasury at the time of major global financial crisis in 1929, kynez require to have the interest rate is zero, and said that the cause of the capitalist system problems dating back to the interest rate.

5-the reduction of funding for banks, banks said the stability of banks after the crisis that facing the problem, the low demand for credit and then drop operations Therefore, many banks attributed part of the money they borrowed from central banks.

6-banks refused to lend among themselves for fear of bankruptcy, as the crisis has shown that the collective solution to the crisis was missing, both on the private sector or government level, a unified Europe politically and economically, but when the crisis the happened European countries did not collect the common solutions, and there were some countries oppose pumping public funds into money markets, and the financial crisis in Greece, some European countries refused strongly to help Greece, and said the German Chancellor (Angela Merkel) that it will not pay a penny for Greece.

7-decline in banks operations in the world and thus decreasing their profits, and banks' balance sheets for 2008 and 2009 have shown, a dramatic decline in bank earnings, and that part of the profits that have emerged were mostly a result of processors accounting and not profits resulting from the real activity of the banks.

8-increasing international indebtedness, whether in the private sector or the public sector, and the annual results of the work of banks has shown that banks are forced to cut off a large part of its revenue allocations to meet the, bad debts and doubtful non-performing.

9- Increasing the deficit in the public budgets in many countries, but it can be said that all States and public budgets have been affected in varying degrees, it was the largest of the US budget deficit, which amounts about one trillion US dollars.

10-Low strategic commodities prices such as sugar, iron, rice, and oil, as the price of a barrel of oil has fallen from 147 dollars a barrel on 09/15/2008 to nearly 40 dollars after the crisis, and still prices at the moment revolves around 75 dollars per barrel or about 50% of its value only at the outbreak of the crisis.

11-high doubts in the international rating companies such as (Standard & Poor's, Fitch), where banks and institutions of high ratings collapsed by those institutions.

12-dropping economic growth rates in many developed countries or underdeveloped as a result of lower economic activity and rates of international exchange, the studies conducted by scientific research centers and private and public institutions and some banks have shown that global trade has fallen by up to about 34%, as Slower economic growth has become the dominant feature of economies of European and Asian countries and the United States .

13-unprecedented High unemployment rates since the 1929 crisis, and in the United States alone, the rate of those who lost their jobs in the months in which the crisis has averaged about (600.000) worker per month, for the first time in the history of the United States of America White US man stands asks financial help, and accept to live in mounted on the ground tent of donations wisher, In Britain, the British government was forced to intervene during the month of million workers who lost their jobs in the social security umbrella, and unemployed offices full of people, in China, which It was one of the least affected, returned nearly 20 million workers from the cities to their villages due to lack of job opportunities where they were laid off.

14-huge losses incurred by the private sector institutions, including banks, both in terms of their leaves or other financial assets where we find that some institutions have lost more than 50% of its assets, especially after the transmission of the crisis from the financial sector to the real sector, the most famous example of this What happened to the American car company Chrysler, Ford and General Motors, Toyota announced that production declined by (50%) of any of the (11) million vehicles to 5.5 million cars a year.

15-cancel off huge amounts of bad debts by banks and other financial institutions and there is a great disparity in the estimation of those amounts .

### **The second topic: the nature of Islamic banks and financial engineering**

any institution known in view of the functions, and services provided to the community, and we have learned the functions of conventional banks of accepting deposits and crediting loans, doubling the money supply and the provision of banking services such as money orders, banking, and the work of clearing and Islamic banks are those services, but according to the requirements of the law Islamic and increase it its social functions such as payment of zakat shareholders and open interest-free loans, financial aid, and more than banks grow for in the investment field so that the investment side in the traditional commercial banks is limited to bank credit granted, while he is in plenty of Islamic banks, both in terms of investment is direct by clients according to different investment formulas, or through direct investment by Islamic banks such as real estate investment, which is this concept deserves to be called universal banks means that their work is not limited to financial intermediation, but also to the investment side and social side, as it deserves to be called development banks.

### **First: Islamic banks and the global financial crisis:**

Farhan, Hassan (2001: p. 183) summarize that the banking systems have arisen in the world to have originated on an interest-based basis as an extension of the work of old moneylenders of non-Muslims, whether they are traders or bankers or financial institutions or banks, but the economic behavior usurious forbidden in Islam and Muslims, and then to be establishment of Islamic banks to operate as an alternative to traditional commercial banks that handle the way usury, economic behavior is recognized for individual must be compatible with the general Islamic behavior.

Also, many of the Muslims (individuals and institutions) averse to dealing of bank interest (usury) and then they not accept in dealing with traditional commercial banks, forcing them to deposit their money in the form of deposits under way or keep it in their homes, and in both cases, it is disruptive for money for his job a real investment, and miss opportunities of individuals, institutions, and thus on the economy as a whole in achieving access.

As the current global financial crisis has clearly shown that based on bank interest of the capitalist system that the system is not valid is the recurrent crises system, and what the world is built in years may lose in a day or in a few days, and this is clear and obvious, and the oven first witness to that has been the world, the



whole great economic crisis in 1929 and then exchanges crisis in 1963 and then inflation crisis in the seventies and the debt crisis in 1980 and then a crisis of Southeast Asian Nations in 1997, and then the software industry and the stock crisis in 2000 -2002 m, then Gulf stocks crisis In 2006, then 2008 crisis and then the system is no longer valid, and this recognition by leaders and experts capitalist countries themselves, and their statements are clear in conferences, seminars and forums.

Also, the current global financial crisis has clearly demonstrated the Islamic banks stability, and lack of vulnerability to the events of the crisis, and why it does not deal usury and gharar Sales , God approach clutches banks of crisis effects according to God Speech (O ye who believe! Allah and His Messenger If called you to greeting you) [Anfal (24).

The researcher believes that the Islamic banks are development banks that basing its work on the Islamic investment formulas means that they are dealing with the real sector, Banks Islamic money in cash is not given to their clients, but buy them what they need goods and services, and then they move production wheel directly Once approval funding for a client, the process moves to the product directly.

#### **Second, the nature of Islamic financial engineering:**

The Islamic financial engineering is the range of activities that include design, development and implementation of each of the financial instruments and processes and innovative operations, in addition the formulation of innovative solutions to the problems of funding and all in the context of religion Shara principles.

It is noted that this definition is identical to the definition of financial engineering referred to previously, but they differ in the fact that Islamic financial engineering are subject to the provisions of Islamic Sharia Unlike traditional financial engineering.

This form of Islamic financial engineering - today – is an urgent need for the development and innovation in Islamic financial institutions, and all that falls under those synonyms not at the institutional level, but also at the industry level, the Islamic financial industry has being an emerging industry compared to conventional counterpart is in dire need of development operations and innovation of Islamic financial products to maintain the authentic identity of the industry and protects the evils of tradition, even if in a legitimate framework, and all this ultimately will contribute to the sustainable growth of the industry as a whole and inevitably reflected on the sustainability of Islamic financial institutions.

#### **Third: positives and bright spots for the application of Islamic financial engineering:**

The application of Islamic financial engineering will provide Islamic banks and financial institutions the most important advantages (ewees, Abdul Halim, 1995: 33:

A) avoid imitation of traditional banks products: tradition is the only alternative for creativity in the absence of Islamic financial engineering and the inability of financial institutions for innovation and the development of Islamic financial products compete with their conventional counterparts, but in return must not download Islamic financial institutions are unbearable ... they are working according to Sharia But within traditional economic systems, which imposes a number of challenges to use some of authentic Islamic financial products, and force those institutions to use some of traditional products after framed legitimate framework, and the infrastructure institutions for Islamic financial industry which is supposed to bear a part of the burden of research and development have not yet its duty to the fullest.

B) the provision of alternatives to traditional financial products: Islamic financial engineering is a way for creativity and development and the creation of the Islamic alternative products to conventional products, and this requires the ability to find alternative products traditional financial products in an environment lacking the catalysts of creativity, in addition to the scarcity of creative individuals, and the need to culture institutions Islamic Finance and understanding of creativity, and the extent of interest in operations research and development, and the extent of knowledge of the creators specialists legitimacy concepts that will enhance the original creativity annual reports of the 12 largest Islamic financial institution in the Arab Gulf region, did not carry any signal that there are provisions for these institutions spend on research and development, at a time when nine European banks spent more than billion dollars on research and development.

#### **Fourth: the factors that contributed by the Islamic financial engineering in the reduction of the global financial crisis:**

Abdul Ghafar Ismail, (2007) indicate that there are a number of economic, technological and regulatory factors, it helped to overcome the global financial crisis, and can be divided as follows:

A-inflation and the volatility of interest rate:

In late 1990 and early 2000, interest rates continued to decline, and encouraged lower interest rates to refinance productive operations, savings and loans out of the market, and has become the largest Islamic banks and the banks that financed the largest real estate, have Islamic banks faced problems have been controlled in the early 1990 century, represented in the short-term deposits and long-term funding, with stability financial returns.

B-customers:

Customers have played a key role in changing the structure of Islamic banking industry, in terms of increased experience and learning in the area of personal wealth management, as well as access to the Internet and access

to online banking customers has helped to facilitate and accelerate financial transactions and costs very simple.

C-lift restrictions:

the effect of deregulation for the operation of Islamic banks and other Islamic financial institutions, lowering ceilings laws and repeal laws, helped mainly in the Islamic banking industry development, and mergers contributed to the development of the industry, as well as social companies, as well as increased investment in corporate securities.

D-diversity:

The diversity of Islamic banking services offered by financial institutions to customers contributed to limit the fallout from the global financial crisis, such as Takaful companies and investment funds, and expand the financial services offered by banks compared with the competition.

E-Globalization:

the benefits of globalization for banks funds, which become moving across national borders and the principles of the Islamic system is not opposed to it, however, this move poses problems for Islamic financial movement for two main reasons, namely: First, the main base for this new direction in the Middle East and Southeast Asia, where small economies and financial systems less developed, and the second thing is that the Islamic financial institutions suffer from small in size and very few of them work in more than one country, but this situation may change because of the merger and the entry of traditional financial institutions in this area, but it has become a problem for Islamic financial institutions to consider the process of integration. Increased globalization of the fluctuation in exchange rates in general, as well as inefficiency in the national economic management, contributed to increase problems suffered by the Islamic financial institutions, but they took control of it through an international agreements to curb speculation and regulation of financial markets, and to reconsider on the situation Islamic finance such as Murabaha.-money and capital markets

Increased competition in the financial markets (short-term and long-term funds) have played a role in the decline of the market share of banks, have found large companies, which can access funds through direct financing cheaper in the capital market (through the use of commercial paper or other securities) and through access to funds from banks.

#### **Fifth: the determinants of Islamic financial engineering:**

Islamic financial market require sophisticated financial institutions benefit from the results of financial engineering - according to Islamic approach - in create and innovate financing ways and processes that ensure that these financial institutions of excellence in the provision of financial products, and check her superiority and take precedence over traditional financial institutions-in this hand, and On the other hand ensure effective intervention of these financial institutions in these markets, either through hedging or risk management.

It should be noted that we cannot consider products that are invented or developed through financial engineering – according Islamic system –have Islamic nature if they are subject to the following three determinants (Alzerra, Abdul Nafii ,2001: 22)

first: Commitment to participate in the profit or loss in the full and clear text unequivocally, and on the basis of legal rules in force in the speculation and posts decades, and this condition is necessary but not sufficient, in the sense that abide by Islamic necessity indisputable, but does not enough in itself to become the paper or innovative Islamic financial instrument actually in the field of application.

Second: that does not re-pay the resources mobilized by the Securities and tools -that issued on the basis of abandoning Riba- to institutions and companies dealing interest system in all its dealings, as you should not invest cash resources Securities Islamic financial instruments in projects that generate Agreed returns in advance for confirmation, with the risk of non-participation in this activity, which generates revenue, Such returns are no different from benefits if called profit.

#### **Third: the need for investment funding in priorities projects in field of public interest of Muslim community**

#### **Sixth: The challenges that prevent the application of Islamic financial engineering:**

The Islamic financial engineering represents by legitimacy properties, Islamic products compatible with Islamic law, as these products are a practical translation of the values and ideals that are enshrined in Islam. Without these products, principles remain a dead letter and the balance in reality, as is the economic efficiency, As for the challenges is represented as follows:

1-challenges related to the institutional aspects, each system has institutional requirements, Islamic banking is no exception they need a number of institutions and arrangements in order to carry out multiple functions. The challenges related to the institutional aspects of the legal framework and appropriate supportive policies, as developed trade, banking and corporate laws in most of the Islamic countries according to Western-style, and these laws contain provisions narrowing of the extent of banking activities and monopoly in the traditional limits.

As well as the supervisory framework, Islamic banks supervision very important to the same degree of importance of traditional banks, and in the present time, the absence of an effective supervisory framework is considered a weakness of the existing system of points and deserves serious attention.

2- challenges related to operational aspects: including the lack of funding through profit-sharing, Islamic financial transactions are divided into two types based one on the fixed fee on capital, the other is based on profit sharing, and Both types provides funding through the purchase and sale of real goods while traditional financial transactions to advance funds for a fixed fee, as well as lack of liquidity assets. (Alzerra, Abdul al nafii.2001: 30).

### Chapter III Results and recommendations

Through the previous discussion, researcher saw the important role of financial engineering in the reduction of financial crises in Islamic banks, this contemporary approach to funding systems aims to achieve efficiency in modern financial products and developed in light of the financial needs and which are characterized as being renewable and variety.

The importance of financial engineering, especially in our modern world today as the balance between several objectives and design innovative tools to accommodate all of these goals together, and this task is not easy as you need for concerted efforts on the organizational form between immigrants and economists, bankers and accountants to get out effective innovations.

The researcher believes that the adoption of the principles of Islamic financial engineering works on the face of financial crises when they occur.

This perception of the importance of financial engineering is a need for Islamic banks from riba-based banks, because Islamic banks are dealing with many complex contracts in their actions, and also dealing in the shadow banking system is adequate for the nature of which makes it greater need of financial engineering, and increases the importance of financial engineering for Islamic banks in that it deals within Shariah and restrictions governing its financing and investment mechanism, but this should be on the financial engineer in Islamic banks take account of these controls and not to resort to tricks, because the provisions and controls came to check the legitimate interest of the individual and the community together. This study was an attempt to put the subject of financial engineering, the study recommends the following:

- adopt Islamic financial engineering to develop quality components and building strategies to meet the needs of customers so that these strategies be in accordance with Islamic law.
- also must be allocated to specific aspects of Islamic banking services are distinguishable from purely regular services of the bank.
- provide Islamic banking business model through conferences, seminars and workshops that explain the foundations and principles of the industry with the diagnosis of the global crisis in the light of these foundations and principles held and diagnose the extent of the impact of this crisis on Islamic banks.
- the establishment of crisis management or a committee where all Islamic banks share in addition to the Central Bank and supports research and decision-making bodies in Islamic banks, and focus on the role of Islamic financial engineering in it.
- Develop plans to deal with the consequences of the crisis.
- deepen and broaden interest in Islamic banking and financial engineering.
- researcher hoped that this study be the nucleus of a number of scientific research that is focused on every tool of financial engineering tools and know how to handle these operations in the accounting systems for companies, especially in our financial institutions in the Kingdom and know how to say these tools and to explore their distance from usurious transactions.
- It is clear the urgent need for more scientific research by professionals for Islamic financial gain access to sophisticated engineering.
- The need to include financial engineering topics in the contents of the academic curriculum that were not on the level of undergraduate Let graduate students.
- encourage studies that related this topic.
- try to develop and adopt strategies and plans for future proactive, centered in the development of basic principles on the foundations for the management of crises before they occur.

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