Financial Engineering and Islamic Banks' contribution to economic development Empirical evidence from countries' experiences

Abstract: This paper aims to explain financial engineering approach, explore the current role of Islamic banks in economic development and examine how can financial engineering activate and support this role through designing, developing and innovating new financial tools and processes would contribute to resolve financial problems economic development faces in most developing countries. In addition, the paper attempts to formulate creative solutions to the traditional financial problems and examine the dynamic interactions between financial engineering and economic development through Islamic banks' role in financing the developmental process using empirical evidence from some countries' experiences.

Keywords: Financial engineering, Islamic banks, Economic development.

Introduction

Financial Engineering is a modern and complicated concept refers to the design, development and implementation of innovative financial instruments and processes, and the formulation of creative solutions to financial problems (Finnerty, 2007). Islamic banks- as an important financial institution- can benefit from financial engineering in risk managing and finding creative solutions to the traditional funding problems which can help in activating its role in financing economic development through using principles and strategies for developing innovative financial tools and products. The whole financial sector- and Islamic banks as an important component of it- plays a growing role in allocating financial resources toward achieving the main goals of economic development. The main aim of this research is to conclude the most effective and applicable mechanisms can help Islamic banks to benefit from financial engineering in the way that maximizing its role in the developmental process. The construction and development of financial products covering all sectors is one of the most important challenges facing Islamic banking, especially under the rapid growth of Islamic finance clients' quality and quantity needs.

Financial engineering and new product development are playing a significant role in shaping today’s global financial system through enriching the economy by new and innovative financial instruments that can increase the efficiency of Islamic banking system by reducing transactional costs, increasing liquidity in the market and enhancing financial accessibility. By examining empirically the relationship between the development of Islamic finance system and economic development in selected countries, an attempt will be conducted to explore many applicable mechanisms can help Islamic banks to benefit from financial engineering strategies in increasing saving's mobilization, improving resources allocation's efficiency and stimulating the technological innovation to strength the link between Islamic banks and real economy's objectives and participate in achieving developmental goals based on the objectives of *Sharia.* Finally, the study answers to the following research questions:

a. Does Islamic banking have a significant role in economic development?
b. What are the challenges Islamic banks facing in developing its existing financial products and innovating new financial tools? And what are the available opportunities to do that?
c. How can financial engineering help to increase Islamic banks' contribution to economic development?

1. Literature Review

(McKinnon, 1973) believes that there is direct relationship between banking operations and economic development of a country since economy's efficiency can be increased by increasing return in capital market. (Beck et al, 2000; Bekaert et al, 2001 and Beck and Levine, 2004) strongly support that there is direct relation between financial intermediaries and economic development. (Levine and Zervos, 1998) found that there is positive relation between banking industry's development and economic development. (Ahmed Ansari, 1998; Rousseau and Wachtel, 1998; Shaw, 2000 and Erestes et al., 2001) argue that Islamic banking have positive impacts on economic development.

Experimental studies have been conducted to examine the efficiency of Islamic banking system against conventional banking system through its impacts on inflation and employment rate (Yousef et al, 1997). According to (Iqbal, 1997) Islamic countries can economically grow if there savings are mobilized through Islamic system. This may due to the fact that return comes from Islamic banks is more than the return comes from conventional banks. (Bashir and Hassan, 2003) examine the relationship between economic growth and financial development in some Muslim countries. (Ghazali, 1994) says that main and foremost objective of Islamic banking system is development of human being by providing full employment, equal income distribution and giving high return to economic development, thus giving justice to society. (Chaper, 2000) says that economic development of a country is measured by GNP and/or GDP, and Financial system offer such feature in their product which mobilize saving in the society and help in economic development through the identification and financing of productive investments.

Islamic banks are working hard to overcome the shortcomings and difficulties in helping the economy to move to a higher stage of development of self-sufficiency, resulting in positive impacts on socio-economic harmony due to the equal distribution of income (Young, 1986, and Luintel Demetriades, 1996). The future of Islamic financial institutions will depend to a large extent on how well they manage risks. This ability could be enhanced if the factors affecting these risks are systematically identified (Hayati etal, 2016). On the Islamic financial system, the empirical studies so far have been done to examine the efficiency, superiority and stability of Islamic banks compared to conventional banks to achieve some intermediate monetary target for the ultimate target which is concentrated towards the achievement of sustaining real economic growth, reducing inflation and lowering unemployment. The results, however, are mixed. (Darrat, 1988) found that interest-free banking system is more superior to achieve the monetary target, meanwhile (Yousef et al,1997 and Yusuf and Wilson, 2005) found no evidence of the superiority and stability of interest-free banking system compared to interest based banking system. According to the theory, the development of the banking industry is favourable to the economic development because the activity of the banks increases the mobilization of the saving, improves the efficiency of the resources allowance and stimulates the technological innovation. Most studies (including recent ones) argue in accordance with the theoretical predictions that there is a positive relation between the financial development and the economic development. (Beck et al, 2000; Bekaert et al, 2001 and Levine, 2005) strongly supported the idea that there is positive relationship between economic development and financial development. However, specific empirical studies on the relationship between development of Islamic banks financial tools and economic development are very rare.

2. Data & Methodology

In order to achieve the aforementioned aims and objectives and answer the research questions, this research adopts a qualitative research methodology that defines the main research frame and process. An inductive strategy is followed with mixed design approach of both exploratory and descriptive tools to examine and explore the impact of financial engineering on Islamic banks' contribution in economic development by generating the appropriate hypotheses and test them against the collected data to identify whether there is significant relation between financial engineering and Islamic banks' role in economic development. The data set is extracted from Global Development Finance and Islamic Banks and Financial Institutions Information (IBIS) database. Also, the inductive and normative method will be used by examining the research questions and hypothesis using individual interviews with a number of responsibility centres and employees in Faisal Islamic Bank of Egypt and studying relevant publications.

3. Analytical study

In order to answer the research questions, the following hypotheses are to be tested and analysed against the data collected and using individual interviews:

H1: Islamic banks have a significant role in economic development.

H2: There are some challenges Islamic banks facing in developing its existing financial products and innovating new financial tools.

H3: There are many opportunities available for Islamic banks to benefit from financial engineering in developing and innovating new financial tools.

H4: Financial engineering represent an effective strategy to increase Islamic banks' contribution to economic development.

For the first hypothesis, many empirical studies have been done to examine the efficiency, superiority and stability of Islamic banks compared to conventional banks to achieve developmental targets including achievement of sustaining real economic growth, reducing inflation and lowering unemployment. (Darrat, 1988) found that interest-free banking system is more superior to achieve these targets. In contrast, (Yousefi et al, 1997 and Yusuf and Wilson, 2005) found no evidence of the superiority and stability of interest-free banking system compared to interest based banking system. Islamic banking system has been grown rapidly from last two decades and gained a stronger position over 60 countries. Financial instruments of Islamic banks are supposed and expected to play a vital role in achieving economic development's goals as follows:

- ***Musharakah*** includes encourages partnerships with a recognized party in the way can idle resources to use and share with small savers of economy which may result in reducing level of population below poverty line. It can also create jobs for many people in society and has a potent effect on controlling inflation and spread of baseless credit, promoting joint ventures without potent investigations and research ensures business successes, not speculations in its success and thus speculative trading of its stocks and securities. In addition, *musharakah* has indirect effect on literacy through financing schools' facilities.
- ***Mudaraba*** is a very potent tool for removing interest from society by providing an interest free tool for skill utilization and especially can help in mobilizing resources of society by employing them and encouraging business management by skilled people and promotes commercial activity; it also helps controlling inflation by promoting interest free business activities. Interest and credit

creation of banks by lending are the major source of inflation in society. *mudaraba* puts a great check on it by involving bank or other capitalist engaged in profit and loss both, not earning predetermined interest exploiting the needs of the business or management of the firm.

- ***Murabaha*** has indirect effect on poverty reduction as it provides a good tool for an efficient deferred sale, providing business men asset of its choice and bank of its profit for effort and risk taking. *murabaha* has also good effect on reducing inflation as it involves use of agency contract with proposed borrower who can buy goods of its demand, at discounted or lowest possible price for its proposed lender as agent, it ensures that lowest prices are used in contract, no need of borrowed interest based loans for borrower, and so inflation will reduce.
- ***Salam*** is useful in reducing agricultural sector poverty easily by enabling the banks and farmers to contract with each other of the crops and to get finance at appropriate time, instead of usurious loans, which ultimately deteriorate through compounding of interest and farmer, will not pay it easily. It has also a great potential in reducing rural sector unemployment and reduces trend towards urbanization as well, by enabling farmers and agriculturists and engaging them at villages and towns which decreases unemployment burden at civic offices and factories. It also generates agricultural and rural sector development and more income for poor people. *Salam* has a great effect on reducing inflation through ensuring increased aggregate supply and reduced food products deterioration by use of pesticide and fertilizers at appropriate times, boosting the yield of land and farms to much extent.
- ***Istisna*** contributes to housing sector, boosting the construction demand, creating employment of factors of production and wealth to society without harmful effects of interest. It has also good effects upon reducing unemployment by boosting construction and house building activities in society and generally any manufacturing activity using Islamic modes of finance.
- ***Ijarah*** has great potential for protecting against inflationary harms to middle class people and entrepreneurs as well, by allowing the use of asset without sudden cash outflows, it enables them to modify, or replace even after some months or years, their equipment or machinery without much cash flow swings, but it may lead to inflation if economy is working at full employment level, then boosting demand of goods further increases its prices in market.

Unfortunately, the above mentioned tools are not used widely as investment tools. So, they don't have major impacts on economic development till now.

For the second hypothesis, the rapid and dynamic changes in the global financial landscape pose various challenges and risks to banking institutions. Operating side by side with conventional banks, Islamic banks are equally vulnerable to risks. The future of Islamic financial institutions will depend to a large extent on how well they manage risks. This ability could be enhanced if the factors affecting these risks are systematically identified. On the asset side, investments, whose funds are *sharia* based, can be undertaken in the form of profit sharing modes of financing (*mudarabah* and *musharakah*), fixed-income modes of financing such as *murabaha*h (cost-plus or mark-up sale), installment sale (medium/long term *murabahah)*, *Istisna /salam* (object deferred sale or prepaid sale) and *Ijarah* (leasing). In contrast, on the liability side, its deposits can either be kept in the form of current accounts or in investment accounts. Current account depositors get their deposits on demand whilst investment depositors in Islamic bank are rewarded with the opportunity to share with the bank the profit and business risks (or losses) of the investment activity. The different nature of its asset and liability composition and the profit and loss sharing basis change the nature of risks that Islamic banks face (Khan and Ahmed, 2001).

One of the most important challenges facing Islamic banks is that entrepreneurs and business owners don't have the motivation to share their profits with banks. Another challenge is related to the risks seriously affect Islamic banks' performance. Credit risk is one of the main risks that affect banks' viability as evident from the 1997 financial crisis. To this extent, (Sarker, 1999) found that the amount of bad debt in Islamic banking is growing. Further, (Khan and Ahmed, 2001) found that bankers of the view that there is a lack of understanding of risks involved in Islamic banking. A research to Islamic financial institutions in 28 countries by (Khan and Ahmed, 2001) found that credit risk is found highest in *Musharakah* (3.69 from a score of 5) followed by *Mudarabah* (3.25). Their findings highlights that the bankers perceive profit-and – loss sharing (PLS) modes to have higher credit risk. Mark-up risk is found highest in product- deferred contracts of *Istina* (3.57). The construction and development of Islamic financial products covering all sectors of the Islamic banking and finance is one of the most important challenges facing the Islamic banking in light of the rapid growth of Islamic finance clients' quality and quantity needs.

For the third hypothesis, although Islamic banks has not made big impacts on economic development till now, but they have important tools for controlling inflation and deflation as even *murabaha* or other small financing tools reduce the spread of credit than interest based banking and thus controlling inflation. Moreover, if *musharaka* and *murabaha* are applied fully, then major portion of businesses profit goes to bank depositors as well, and help in reducing income discrimination in society. Innovation is essentially unpredictable, as many of the variables that influence the acceptance or rejection of an innovation. The use of tools, equipment and techniques are critical for innovation and creativity. Financial engineering can provide principles and strategies for the development of innovative financial solutions and Islamic banks have great opportunities to benefit from financial engineering's tools and techniques to develop creative and innovative instruments and products given the financial principles in Islam and according to *Sharia* compliant.

Islamic banking industry has great opportunities to contribute to economic development many ways. The first one is increasing financial products as the conventional banks can't satisfy all financial needs. The second way is using savings more efficiently as they could be. Moreover, because Islamic banking requires borrowers and lenders to share the risk of failure, it provides a shock absorbing mechanism that is essential in developing economies. In Addition, Islamic banks can provide an effective mechanism that allows the sharing of business risk in return for a stake in the profits which encourages investment and enhances social justice.

According to (Suwailemal, 2006), there are four principles of financial engineering which is grouped into goals and methodology. Goal principles are the principle of balance and the principle of integration while methodology principles are principle of acceptability and principle of consistency. Financial institutions need to develop new products frequently in order to either keep pace with market developments or due to the changes in their product lifecycle. Most products go through similar sets of stages in their lifetime. (Urban et al., 1987) defines the stages of the product cycle as introduction, growth, maturity, and finally decline. Ensuring sustainable growth in Islamic banks' financial tools depends largely on their ability to successfully create and launch new and superior products that can deliver unique benefits with real added value to their customers.

For the fourth hypothesis, the direct relationship between investment and profit is the main difference between Islamic banks and conventional banks which has a main objective to maximize shareholder wealth. (Dar and Presley, 2000) identified various pillars that allow Islamic banks to deliver competitive performance and promote socially and ethically responsible business practices. Of these, the three main pillars that contribute to improvements in quality of life throughout society include *Sharia* supervision, screening and community based investment. *Sharia* supervision of a qualified advisory board of Islamic law is an essential element of the structure of Islamic finance. It is assumed by the Board to be independent and monitors investment strategies. Economists often discuss the relationship between financial development and economic development, but each of the same reality. (Schumpeter, 1912) argued the importance of the banking system in the level and growth rate of national income in promoting economic development through the identification and financing of productive investments.

Islamic banks have to work hard to overcome the shortcomings and difficulties in helping the economy to move to a higher stage of development of self-sufficiency, resulting in a positive impact on socio-economic harmony due to the equal distribution of income (Young, 1986; Demetriades, 1996 and Ansari, 1998). (Phase and Amba, 2003) argue that the expansion in the financial system can have a positive impact on economic growth. (Robinson, 1952) believed that economic growth leads to financial sector development. (Christ, 1996) supports the hypothesis that the demand after the cause of economic growth in the financial sectors for development. It cannot be the financial system and therefore support the leading sectors in the growth process. On the other hand, the Islamic financial system, and experimental studies to date have been conducted to examine the efficiency and superiority and stability in Islamic banks as compared to conventional banks to achieve some milestones cash the ultimate goal that focuses towards the sustainability of real economic growth, reducing inflation and reducing unemployment. Applying financial engineering in Islamic banks can encourage people to invest as investment depositors receive a share in the bank's profits. Investors are motivated by the human desire toward ownership, high rewards and the satisfaction of being part of a successful project (Martan et al, 1984).

According to (Iqbal, 1997), the economic development of Islamic countries can be greatly enhanced by the Islamic financial system due to the mobilization of savings that are being kept away from interest based banks and the development of the capital markets. This motivation to invest in Islamic banks may also stem from the fact that research shows that the share in the bank's profits may at times be higher than the fixed rate of interest given by conventional banks. According to (Iqbal, 1997), one can expect that the Islamic financial system is best for the elimination of debt financing, and improve the efficiency of allocation. In the Islamic banking system is experienced and stability in times of crisis, the share of investment depositors automatically at risk because of participation in the profits and losses, and this means that individual banks and the whole banking system is less likely to break (Zaher and Hassan, 2001).

Focus on Islamic finance in the profitability and rate of return on investment as a result of an exchange of shares and benefits has the ability to channel financial resources to more productive investments, and therefore increases the effectiveness of the funding process and real sectors (Kahf et al, 1998). (Qureshi, 1984 and Nagvi, 1981 and 1982) claim that Islamic bankers are increasingly exposed to risk due to equity-based financing. Using financial engineering in Islamic banks offers depositors with some impact on investment decisions and gives banks and financial institutions to participate in the decision making process. This allows both for risk and decision making over a much larger number, and a variety of people, enabling greater

4. Empirical study

Countries' experiences may be so helpful in having an evaluation to financial engineering in Islamic banking industry and its efficiency to increase and activate Islamic bank's contribution to economic development in the selected countries. It may also help in verifying the need for engineering Islamic financial products and identifying the rules and standards ensuring that financial engineering in Islamic banks are able to provide Islamic financial products covering all sectors of finance and invent new solutions to manage various financing risks and achieve higher rates of economic development.

According to Central Bank of Malaysia (BNM), the Islamic financial system in **Malaysia** has evolved as a viable and competitive component on the overall financial system as a driver of economic growth and development as Malaysia established the first Islamic bank in July 1983. The Islamic banking industry as a whole showed commendable results in 2005, with profitability and assets surpassing for the first time the RM 1 billion and RM 100 billion thresholds respectively. The total assets of the Islamic banking sector in 2005 increased significantly by RM16.8 billion or 17.7% to RM 111.8 billion with more than half of the increase attributable to a 16.5% (RM 9.5 billion) growth in total financing. As at the end-2005, total outstanding financing amounted to RM 67.4 billion (2004: RM57.8 billion) or 60.2% of the total Islamic banking assets (BNM Annual Report, 2005). The good performance and rapid growth of Islamic financial industries in Malaysia proved the feasibility of the system which has become an integral part of the country‘s financial system in both total assets and the number of players in the industry (Ahmad, 2016). Malaysia has accumulated total asset for US$ 86.4 billion, putting Malaysia below Iran which recorded Islamic banking’s total asset of US$ 614.1 billion. Meanwhile, asset of Islamic banks in **Indonesia** amounting US$ 10.8 billion is only one-eight of Malaysia’s Islamic banking asset. But it is still bigger than Islamic Bank in **Pakistan** which is only US$ 7.3 billion. In terms of market share, Islamic banking in Malaysia has the biggest market share of up to 19.98% in 2012, while Indonesia has only 4.58% in 2012 compared to conventional banking. Pakistan, which is smaller in the asset than Indonesia, has the bigger market share, and has reached 8.6% in 2012 (Ascarya,2013). The evidence suggests that innovation on Islamic banks products in Indonesia is still lacking and far behind products dynamics (Ginanjar, 200?).

(Grewal, 2007) argued that Indonesia occupied the third cluster on the product innovation and market development of Islamic banks. While the fourth cluster as the highest cluster is Malaysia, Bahrain, and United Arab Emirates. The fourth's cluster is the country with the most innovative and varied in product development. While Indonesia, North Africa, Turkey, and Qatar is under the fourth cluster's countries. Thus, these countries are still less than the fourth cluster. Countries Islamic banks

Developers divided into four clusters. The fourth cluster (the highest), is Malaysia, Kuwait, Bahrain and the United Arab Emirates; third cluster consist of Indonesia, Brunei, North Africa, Turkey and Qatar. Second cluster includes Germany, USA, Singapore, Lebanese and Syrians, while the lowest cluster includes China, India, Hong Kong and Azerbaijan (Agustianto, 2010).

While development of Islamic banking and finance industry in Malaysia was began with the enactment of the Islamic Banking act 1983 and then followed with Islamic Insurance act 1984 and SPTF guideline 1993, the development of Islamic banking and finance in Indonesia began with the establishment of *Bank Muamalat Indonesia* in 1992 and followed by the Islamic banking law in 2008 (Minai, 2013).

For **Pakistan**, the first Islamic bank was founded in 1950's free interest loans and only charging a small amount of fee on its services which are their operating cost (Wilson, 1983). A preliminary study on the relationship between a pilot Islamic banking and economic development in Pakistan showed that in the long run, the financing of Islamic banking is positively and significantly associated with economic development and accumulation of capital. Islamic financial system in Pakistan is more stable than the traditional banking system due to the elimination of debt financing. It also reduces inflation in the economy and cannot provide the money to go higher than the supply of goods. Islamic banks are less risky than conventional banks, both for investors and entrepreneurs share some of the risks involved in the business. The mentioned study attempts to consider the opinions of the interviewees regarding the role of Islamic banking in Pakistan in economic development. Six interviewees were asked about the types of effects of Islamic banking on economic development in Pakistan. They were asked about 8 different types of effects. 66.66% of interviewees answered that converting from conventional banking to the Islamic banking system has had a positive effect on the mobilization of deposits, 50% agreed strongly on the positive effect of Islamic banking on allocated financial facilities,50% of interviewees support the role of Islamic banking in the reduction of inflation, 83.33% believe that Islamic banking has a positive effect on the employment,33.33% of interviewees believe that the system has had a positive effect on trade, for which the provision of financial facilities to this sector and 66.66% believe that Islamic banking in has had a positive effect on GDP. These results also indicate that improvement of the Islamic financial infrastructure in Pakistan may benefit economic development.

Islamic banks reflect the system and activities in which they are operates, **Iran and Saudi Arabia** are strong example where Islamic banking system work according to Islamic principles. In **Kuwait**, Islamic system is focused in petroleum sector and in **UAE,** trade and financing are considered.

For Qatar, an empirical study by (Mosab, Tabash and Dhankar, 2014) on Islamic banks' financing from 1990 to 2008 and its relation with Gross Domestic Product, Gross Fixed Capital Formation and Foreign Direct Investment inflow as proxies for real economic growth. The empirical results generally signified that in the long run, Islamic banks' financing is positive and significantly correlated with economic growth in Qatar. This reinforces the idea that a well-functioning banking system promotes economic growth. Furthermore, the results showed that Islamic banks' financing has contributed to the increase of investment and in attracting FDI in the long term and in a positive way. The results obtained from Granger causality test reveals a positive and statistically significant relationship between economic growth and Islamic bank's financing in the long run. The results indicated that a causal relationship happens only in one direction, from Islamic banks' financing to Foreign Direct Investment and Gross Fixed Capital Formation which means that Islamic banking attracts Foreign Direct Investment into the country. Compared to Saudi Arabia and Kuwait, Islamic banking in Qatar still claims a small share in the total banking assets but it is expected to grow well in the near future.

In Jordan, An attempt has been conducted to explore the relation between developing Islamic banks' financial instruments and economic development over the period (1980-2012). The results showed that there is positively growth contribution of Jordan Islamic banks in the social and economic development process although these banks suffer from many problems. This suggests that higher Financial Islamic banks developing would lead to higher contribution to economic development in Jordan.

For Nigeria, (Ibrahim, 2012) has examined the impact of financial intermediation on economic growth in Nigeria. Time series data from 1970 to 2010 were used and were gathered from the Central Bank of Nigeria (CBN) publications. For the analysis, the unit root test and co-integration test were done accordingly and the error correction model was estimated using the Engle-Granger technique. The growth rate of the real gross domestic product is used as a proxy for this variable. For financial intermediation, two indicators commonly used in the literature are used as proxy. These are the ratio of broad money supply (M2) to nominal gross domestic product (NGDP) and the ratio of domestic credit to the private sector (CPS) to the nominal gross domestic product (NDGP). While the former measures the capability of the banks to mobilize funds for investment purposes, the latter measures the financial opportunities available to firms, most especially new firms. The study established that financial intermediation has a significant impact on economic growth in Nigeria.

For Bahrain, The Central Bank of Bahrain (CBB, 2015) refers to *Sharia* non-compliance risk in the Islamic banking regulation as the risk that arises from Islamic bank licensees' failure to comply with the *Sharia* rules and principles determined by the Sharia Board of the Islamic bank licensees and the CBB. However, a broader definition of Sharia non-compliance risk can be 'the risk of reduction in earnings or value, through financial or reputational loss resulting from products and services being non-Sharia compliant'. This will include all contracts and agreements relating to the institution's products, policies, transactions and any new services that are introduced.

Finally, and for western country such as **United Kingdom**, there are over two million Muslim residents in UK, most of whom are British citizens. From the perspective of western bankers, Islamic finance offers a challenge to use their skill in financial engineering to adapt existing services so that they can be accepted by their Muslim clients. The banks are providing a personalized service, tailored to their client's requirements. Over the last decade many of these western institutions have gained a better knowledge of what customers from the Gulf in particular want and the bank staff have some idea of the basic principles of Islamic finance. London has emerged as the major Centre for Islamic banking and finance in the West. Due to (Wilson, 1995), a study has examined the characteristics of the British market for Islamic banking and financial services and analyzed the activities of the major institutions involved. Regulatory issues are covered, which present a particular challenge in an environment where little account has been taken of the needs and preferences of Muslim clients, especially with regard to those who wish to respect the *sharia* which prohibits interest based transactions. Islamic financial products offered at the retail level include investment accounts, Islamic portfolio management, commodity and equity based fund management facilities and Islamic mortgages. Muslim corporate clients can obtain short and medium term trade finance as well as leasing terms for equipment, although this is on a very limited scale at present, with *Al Baraka* as the main provider. Islamic project finance can be arranged for both private and state organizations from Muslim countries. Such financing usually being United States dollar denominated, although other currencies can be arranged on request. The attraction of London for Gulf clients, which include all the major Islamic banks, is the breadth of specialist financial services offered, the depth to the market and the solidity of the major banks, which include all the leading global players.

In summary, the success of financial engineering in Islamic banks and its effectiveness in activating the role of Islamic banks in financing economic development require focus on clear strategy encompasses certain actions to create guidelines for the new financial products' objectives with proper and detailed planning, full understanding of the market environment, including customers demand, competitors' products, availability of resources including experienced staff, financial and system resources, management commitment to support, encourage, rewards the team and to provide the required resources.

5. Findings and Conclusions

Financial engineering refers to a process of innovation governing a set of activities that leads to a significant improvement on the existing financial tools and products and/or creating new products. Based on this, it is critical for Islamic banks to create the appropriate environment for financial engineers to be creative and add value through innovation in accordance with its main principles, risk sharing and prohibition all forms of *riba*. Islamic financial instruments are different by nature as they are required to adhere to *Sharia* requirements in addition to the legal and regulatory framework. Therefore, innovation in Islamic finance becomes more challenging. In addition, competition between Islamic and conventional financial institutions as well as market conditions geared towards efficiency is another important factor that needs to be considered in relation to innovation. As Islamic financial products are in most cases new, there is a need to educate customers on how these products operate and how they are in compliance with *Sharia*. Hence the acceptance of the product becomes crucial to the success. Unlike conventional financial instruments that are designed to shift risks, Islamic finance contracts ensure equitable risk sharing between the contracting parties. Thus Islamic financial institutions become risk takers by nature. So, the use of financial engineering becomes essential to ensure successful risk management in Islamic banks. Financial engineering challenge is to introduce new *Sharia* compatible products that enhance liquidity, risk management, creative solutions to finance problems, lower funding costs, increasing return on investments and portfolio diversification.

Until now, Islamic banks are not creating the expected impacts on economics development in most countries they are operating in. The effective implementation of financial engineering in Islamic banks should lead to activate its role in developmental process and increase its contribution to the fulfilment of the socioeconomic objectives. Applying financial engineering methods to Islamic banking requires full understanding of the risk return characteristics of the underlying transactions and designing a *Sharia* compliant solution with suitable risk-return profiles that meet the liquidity and safety needs of the involved parties. Hence taking into account the nature of Islamic financial principles that promote risk sharing methods, Islamic banks can benefit from financial engineering process to improve their capability of financing new small and medium projects, meeting the financial needs of developmental process and enhancing the efficiency of the financial market by designing and customizing financial products to meet the specific needs of a diverse range of customers. Engineered financial products in Islamic banks can therefore, cater to the needs of different investor groups which would encourage investment as an important component and a crucial part of economic development process.

6. References

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