

The Techniques of Islamic Financial Engineering and Their Role in Achieving Sustainability Development

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Abstract:

Financial innovations are considered as a dire need for financial institutions for the purposes of sustainability and competitiveness. Various financial innovations, such as credit cards, checks, Bai us Salami, lease-to-own, diminishing musharaka, and so forth for improving economic activity, increase profitability and the mutual interest between financiers and founders. The problem of the study lies in the emergence of financial geometry that led to provide various innovations some of them commensurate with Islamic law while the majority of it do not commensurate with it. All of which have led specialists in financial Islamic to the necessity for accepting these innovations because of them might lead to crisis and financial problems. The justifications of the study embodied in the contribution from the researcher in the processes of connecting jurisprudence and economic studies due to their importance. The significance of the study stems from its ability open new doors for updating Islamic finance that the knowledge of the adoption determinants, the diffusion of financial innovations, finding a methodology based on scientific basis are considered an important issue for defining a mental perception for financial engineers and decision makers that help them in taking their decisions. The methodology of the study the researcher will adopt in this study the descriptive approach upon indicating financial innovations in terms of concept, characteristics, and emergence factors. Findings and Recommendations the researcher recommends the necessity to go deeper into the techniques of financial engineering related with risk management, modeling, and developing it in a manner consistent with Islamic bank activities and provide them with tools that enhance its growth and prosperity and its confidence worldwide. The necessity for Islamic banks by an enhance from supervisory authorities for establishing financial engineering techniques concerning the operation risks in Islamic banks.

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INTRODUCTION

Under competitive situation among financial institutions, disturbances, financial crisis, and the crisis experienced by global financial markets resulted in low standard of living, the bad economic and social conditions, and the political tensions. The dire need for drawing attention towards innovation and renovation in employing money in the domain of Islamic law and its regulatory rules which are considered in its entirety an integrated system for human life that prompted towards land rehabilitation by all permissible means and methods. Furthermore, their embodied restrictions on human behavior in some aspects. However, such restrictions did not

impede innovation, rather than they impede the prohibition circle and remained the legitimate circle for enabling the human effort to both innovate and renovate(1,2). The importance of Islamic financial engineering is highlighted as an applicable tool for finding innovative solutions and new financial tools that combine between Islamic law and the economic efficiency for invading Islamic financial institutions for maintaining a variety of tools and financial products enable it to manage its liquidity profitably. Also, the existence of appropriate flexibility for responding to environmental economic variables. At the beginning of the 21st century and in the context of globalization, the achievement of sustainable

development became a primary indicator for the continuity of humanity. In addition, the various development dimensions represented one of the most important priorities on the agenda of most countries of the world that work towards repair and update its communities(4,5). In fact, the achievement of the concept of sustainability in development is considered one of the most important challenges.

Review of Related Literature

In spite of the investigation, asking experts, searching the library of Yarmouk University database, and University thesis in Arab and foreign countries that are displayed on the internet, none arbitrated scientific academic thesis in this subject in its integrated image. The most important thing discovered by the researcher was Qakthanfaje, Samer Mathher, financial innovation jurisprudence among verification and scramble 2015 that is electronically published the book tackles the importance of innovation as an intellectual subject for solving the problems and then the method of connecting innovation with financial curriculum that is known as modernity and innovation which in turn insists on the compatibility of jurisprudence provisions for rationalizing the transaction and removing the resources of Shubha that differentiate between halal (the allowed issue) and haram (the prohibited issues) by studying and examining in an appropriate for scientific research based on the principle of the moderated and thus we have been moderated(6,7). This book included a group of chapters concerning the identity of innovation and its necessity, its reality, and its connection with Islamic financial engineering, the tricks, the innovation rules, and chapters of issues applicable on financial innovation. The researcher expects to add a scholarly addition to the following aspects:

1-Following theories, criticizing, and extracting the most important things from them for knowing the determinants of adoption and proliferation.

2-Aknowledging the modern techniques in Islamic financial engineering.

3-Reformulating the scientific practical methodology in adopting financial innovations for decision makers in the whole concerned institutions.

4-Adopting and studying the factors contributing in increasing the adoption and proliferation as the governance of financial innovation etc.

Islamic Financial Engineering

Islamic financial engineering needs today a variety of tools and financial products that gave it the adequate flexibility for responding to various requirements imposed by economic environment variables. There is not any product that meet these requirements(8,9). The best evidence of this is the reality of traditional bank institutions that were not only confined on one product, but rather included various and diverse products for meeting various financing and fiduciary purposes that are required by Islamic banks for adapting the developmental customers aspirations that contribute in achieving sustainable development. Therefore, this axis will be touched upon for defining Islamic financial engineer, the reasons behind the dire need of it, and the general and private principles governing financial engineering. The concept of Islamic financial engineering that defines as: “a group of activities including designing and developing process for tools and innovative financial process. Also, it aims at formulating creative solutions for financing problems within Islamic domain. It is clearly obvious that this definition is in conformity with traditional financial engineering definition. However, shall take into consideration the necessity to be compatible with Islamic law¹.

Such definition implies that Islamic financial engineering includes the following factors²“.

1-Innovating new financial tools.

2-Innovating new financing mechanism.

3-Creating new solutions for financing mechanism, such as managing liquidity or debts, or preparing

financing formula for specific projects that adapt the surrounding conditions of project.

4-The above-mentioned innovations whether in the tools or processes should be compatible with sharia by Sharia by being away as much as possible from jurisprudence variations i.e. to be characterized by sharia credibility. Accordingly, Islamic financial institution aims at finding financial tools and products that combine between sharia credibility and economic efficiency the former is considered as the basis because it is considered as Islamic while the later is considered as the basis because it meets economic need and compete traditional tools as illustrated below³: Sharia Credibility defines as the ability for Islamic products to be compatible with Sharia as much as possible. All of which includes disposing of Jurisprudence argument as much as possible. The main purpose of Islamic financial industry does not lie on preferring one jurisprudence opinion rather than another instead achieving an innovative solution that might be agreed upon as much as possible. Thus, it is essential to differentiate between what is legally permissible and the goal of Islamic financial industry such as having ideal mechanisms and products since sharia I applicable at any time and at any place i.e. the solutions provided by Islamic financial engineering should be as a model for Islamic economy. It introduced patterns for individuals to deal with at their sales unless they are devoid of what is prohibited. It might take different patterns. Therefore, it was essential to study the jurisprudence of contemporary interactions in order to differentiate between the fixed and developed, to consider sharia adaptation for modern images in order to reveal sharia law and to find alternatives if applicable. As such the importance of the existence of financial engineering⁴.

The Principles of Islamic Financial Engineering

Islamic principle might clarify the concept of financial engineering in Islam by the saying of

prophet peace be upon him: “Those who made a good sunnah in Islam he will have its reward and for those who mimicked him until the judgment day they will receive all their rewards completely. However, those who made a bad sunnah he will have its sin and those who mimicked him they will receive all their sins completely”. (10,11,12)

This saying implies the ask for innovation and finding solutions for various financial and non-financial dilemmas as long as t for people’s interests that bring the good and impede the danger⁵.

The genera sunnah for Islamic financial engineering: 1-Forbidding all kinds of usury which means in language addition i.e. the addition on the capital whether increased or decreased ⁶. God almighty said: “But if ye turn back, ye shall have your capital sums: Deal not unjustly, and ye shall not be dealt with unjustly”⁷ and God almighty says “O you who have believed, fear Allah and give up what remains [due to you] of interest, if you should be believers”⁸.

2. The freedom of contract Which means to let people contract whatever they want and whatever conditions they impose. However, their contracts should not include any forbidden issue by law since it will be considered null and void or the forbidden part of it shall not be fulfilled⁹.

3. Facilitation and avoid embarrassment: God almighty opened the contract door for people and allow things, while only put restrictions that only forbid injustice or prohibit people from taking people’s money¹⁰ Istihsan (to consider something good) i.e. transmitted interests. It is a door for the freedom of contract and that transmitted interest entrusted with Islamic sharia provisions are the interest that preserve the purpose of sharia¹¹.

Warning from two Bay’ah in one Bay’ah: the last basis was for Islamic financial engineering which is to forbid two Bay’ah in one Bay’ah. This rule is considered one of the most important basis for Islamic

financial engineering. Its importance lies in sharia safety and economic efficiency for financial transactions¹².

The Techniques of Islamic Financial Engineering:

It is clearly obvious that financial innovations are not by coincidence nor by experience, rather than they are resulted from in-depth knowledge of financial field. Moreover, they are the outcome of science processes that are considered one of the newest knowledge branches in financial majors, namely financial engineering science which aims at designing and providing specific organizational inputs and restrictions. It should be noted that the experts of Islamic economy added the conditions of sharia credibility and economic efficiency by leaving this terminology not freed until the data of writing the research due to the relative modernity of the subject (13,14,15). In addition, the experts tried to explain by other theories based on analytical studies of economic behavior for common institutions in the innovation world the goals revolved around diversifying profits resources, reducing or avoiding risks managements, and supporting the enterprise's competitive position, and innovating mechanisms for facilitating mutual processes for the purpose of activating financial turnover at micro and macro level (16,17). The risks of debt and uncontrollable assets called as toxic assets. In addition, some of the risks financial like derivations. It is worth mentioning that theorists' explanations are varied and multiplied in accordance with the inputs they have which, in turn, lead it to be only confined on the service of decision makers directly. Therefore, such innovations are partly accepted. Regardless its huge importance in understanding innovation environment and primary inputs. In accordance, Islamic banks the best manner for calculating the estimation value at risk that is represented in calculating each funds or investment portfolio separately. As such, it could be said that the displayed value for hazards in Islamic banks are represented in the following points:

The Estimation of Value at Risk for Murabaha transactions portfolio for buying.

The Estimation of Value at Risk for Salam and Bai Salam operations.

The Estimation of Value at Risk for istisna'a operations and parallel istisna'a portfolio.

The estimation of Value at Risk for operational leasing and closed-end leasing portfolio.

The Estimation of Value at Risk for fixed musharaka and diminishing musharaka.

The Estimation of Value at Risk for speculative operations portfolio.

The head of Islamic financial services in various issued standards pointed out the pressure testing and the necessity for applying them on Islamic banks because they are considered as a primary tool of risks management which warn the higher administration of unexpected outcomes related with various factors and provide an indicator for the amount of available capital for absorbing the loses in case if substantial shocks occurred. Also, pressure testing has been indicated in various issued standards which clarifies these standards in guiding principles for managing the liquidity risks for institutions (except Takaful Charity Foundations and Islamic Social Investment programs) that provide Islamic financial services in March 2012 since pressure testing was mentioned 46 times within this standard (in paragraph 9

110 – 114 – 117 – -25- 22 و 16 و 14 و 10 و 9 و - 39 – – 134 – 158 – 159- 49 – 55 56 – 66 – 67 – 88 – 96 – 125 – 129 – 131). (18,19,20)

This standard clarified the guidance for applying pressure testing in Islamic financial services since it necessarily guarantees a special department addresses the essential conditions for effective pressure testing, while the other section tackles guiding principle for pressure testing. However, the last department is concerned in guiding principles for supervisory authorities.

Sustainable development by employing Islamic financial engineering.

Sustainable development.

The concept of development in general and sustainable development in particular as an advanced and comprehensive phase in development carries with it a philosophy that aims at bridging the gap that has begun to widen between human and environment. All of which enabled the human to coexist with this environment inside and out. It is worth mentioning that some of them defined it as: 'patterns of development that connect human activity with social and economic features'¹³.

The development might extent from current generations to the future generations in a track that avoids the negative impacts on environment, increases the development rates during the time and guarantee the optimal use of unrenewable resources, maintains the renewable resources(4,5), eliminates default, negligence, and damage. In particular, this special period in which the world had witnessed massive dramatic change represented in changing the manner of economic resources management to the free economic pattern. Besides, the correlation between international financing markets that are represented in changing the management method of economic resources to the free economy. Most importantly, the reason behind their correlation attributes to the information technology and communication revolution, and the emergence of international and local problems alike and mounting its impacts in which the individuals realized the extent of its dangerous (21,22,23).

However, the problem was not raised in this regard due to the lack of specialized global centers in the field of Islamic financial industry. The continuous research and development is essential for guarantee the continuity of economic development. In fact, the need of financial industry institutions for developing its products are boiled down in diversifying the profitability resources to the financial institution.

1-The current products should avoid maintaining its growth. It is commonly known that each product has a life cycle.

- 2- The market stops requiring the product and stabilize at its lowest levels.
- 3- Reducing the investments risks by diversifying both its forms and its sectors.
- 4- Supporting the competitive position for the financial institution in the market.
- 5- The continuous development for products increases the institution experience and keeps it in continuous

Based on the foregoing, a specific strategy concerning the field of developing Islamic financial products by studying the needs of markets and developing technical methods essential for guarantee the economic efficiency for financial products. Moreover, this strategy requires laying clear basis for Islamic financial engineering and employing it for financial techniques that are compatible with the disciplines of Islamic banking work. Also, it allows it to benefit from traditional financial industry- without mimicking or imitation unless it meets the requirements of sharia liability which, in turn, helps the completion of cognitive system without an isolation from Islam institutions that constitute the infrastructure for Islamic financial industry. Activating their role in Islamic financial industry, such as Islamic financial services, general counsel for banks, Islamic financial institutions, and so forth in the field of development and innovation. All of which requires qualified human component. As such, the contribution in the development of human resources which considers one of the most important basics for achieving sustainable development(24,25).

Recommendations:

- 1-The researcher recommends to go in-depth into financial engineering techniques related with risks management, modeling, developing it in a way that commensurate with Islamic banking activities, and providing it with tools that accelerate its growth, prosperity, and promoting the believe of it worldwide.
- 2- Assuring the necessity for Islamic banks to support the regulatory authorities towards establishing

database for the techniques of financial engineering related with the operating risks in Islamic banks. In a manner that enable Islam banks to determine all the operating risks types that could impose them and measuring these risks more precisely in order to perform its developmental role in the field of sustainable development within the reliability that fall on Islamic financial institutions as an important part of economic system in Islamic countries and on this planet.

3- The performance of Islamic banks and regulatory authorities in each country and the council of Islamic financial engineering by adopting developed financial techniques more subjective for Islamic accounting from traditional techniques due to its contribution in the success of the works and activities of banks.

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