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Methodology In Achieving Therapeutic  
Process of Global Financial System:  
Shari'Ah Objectives vs. Industry  
Practitioners**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

In the name of Allah, the Beneficent, the Merciful

***ISLAMIC Financial Engineering and Methodology In  
Achieving Therapeutic Process of Global Financial  
System***

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*SHARI'AH Objectives vs. Industry Practitioners*

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## **ABSTRACT**

Islamic Financial Engineering is the Shari'ah unique approach to formulate the parameters that any firm should use or attempt to minimize the risk adherent to any legal asset investment. Such attempts will hopefully bridge the gap in awareness on the part of Muslim economists and conventional practitioners. Our hybrid quantitative /qualitative research paper explores other less known, understood, and documented Islamic capital market instruments, such as Islamic derivatives. Shari'ah objectives towards derivatives, such as forwards, futures and options are yet to be matched for a possible compliant practical application in the implementation of such risk management tools. Islamic derivatives have been created and are now being used in the Islamic financial industry. These derivatives like other Islamic products use Shari'ah approved contracts and instruments, such as, inter alia, wa' ad, Salam, and Murabahah. The structure of the Islamic derivatives uses a combination of the above mentioned contracts. Unlike Sukuk there are no standards that have been passed by AAOIFI. This means that Shari'ah parameters have not been standardized for the industry on these instruments. Increasing the transparency of these products would ensure adherence to Shari'ah and open up the market to better governance and comprehension. Which will result in; the standardization, identification, and examination of the various Islamic derivative products that are being offered in the market under the umbrella of Shari'ah provisions and as applied by practitioners.

## **KEYWORD:**

Islamic Financial Engineering, Shari'ah, Global Financial Crisis, Islamic Derivatives

## EXPLANATION OF KEY ISLAMIC FINANCIAL ENGINEERING TERMS AND LITERATURE REVIEW

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<b>Shari'ah</b>	Islamic law, originating from the Qur'an (the holy book of Islam), as well as practices and explanations rendered by the prophet Muhammad (Allah Blesses Mohammed and give him peace) and Ijtihad of Ulama (personal effort by qualified Shari'ah scholars to determine the true ruling of the divine law in a subject matter on which the revelation is not explicit).
<b>Maqasid Shari'ah</b>	Refers to the desired objectives of the Shari'ah when determining a hukm <sup>1</sup> aimed at protecting human Maslahah <sup>2</sup>
<b>Gharar</b>	Risk in which existence and non-existence are equally likely. In other words is what involves two possibilities, the more likely of them is the less desirable. These definitions point to a simple fact: Not any level of risk is Gharar. This is made explicit by Ibn Taymiyyah: "it is well known that Allah and his Messenger did not forbid all kinds of risk." <sup>3</sup>
<b>Asset Securitization</b>	A process of issuing securities by selling financial assets identified as the underlying asset to a third party. Its purpose is to liquidate financial assets for cash or as an instrument to obtain new funds at a more attractive cost, compared to obtaining funds through direct borrowing from financial institutions.
<b>Islamic Capital</b>	A department with products in the equity, debt and derivative

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<sup>1</sup> Ahmad al-Raisuni, Nazariyyah al-Maqasid 'inda al-Imam al-Syatibi (1992), The International Institute of Islamic Thought, Herndon, p. 7.

<sup>2</sup> This means making a judgment based on the principle of general benefits on matters that have no clear *hukm* from the Quran or the Sunnah

<sup>3</sup> Al-Misri, M. (1993), Al-Maysir wal Qimar, Damascus, Dar Al-Qalam, (Arabic).

<b>Market</b>	sectors, as well as analyzing the securities of listed companies. It
<b>Department (ICMD)</b>	employs full-time officers with Shari’ah education background, especially in the disciplines of Fiqh Mua’malat (Islamic commercial law) and modern finance. The combination of professional personnel from these two different backgrounds is essential in creating a working group capable of meeting the set objectives. <sup>5</sup> Its research findings are then presented to the SAC (Shari’ah Advisory Council) for approval <sup>4</sup> .
<b>Murabahah</b>	is a frequently used form of wholesale debt-based Islamic finance between a bank and its client to replicate short-term money market deposits and medium-term syndicated loans. Such a contract involves the sale on a deferred payment basis of a commodity, usually metals, at the market price plus an agreed profit margin to the borrower, who raises the required funds by immediately selling the asset to a broker or a financial institution.
<b>Bay Bithaman a'ajil</b>	Contract is primarily used for long-term financing and does not require the lender to disclose the profit margin.
<b>Ijarah lease</b>	An Ijarah lease fulfills the functions of either finance or operating lease. It is increasingly used in aircraft finance by lessees in Islamic countries and in operating leaseback transactions, which combine conventional lending with Islamic investment. Note that Islamic scholars make no distinction between operating and financial leases as to the classification of profits from the use of assets against the prohibition of interest.

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<sup>4</sup> Khairil Anuar Abdullah ( June 1997), “The Issues and Prospects of Establishing a Sound Islamic Capital Market”, Labuan International Summit on Islamic Financial and Investment Instruments, Financial Park Complex, Labuan, p. 5.

**call warrant** A right, but not an obligation, to buy a fixed quantity of an asset (such as shares) for a specified price within a limited period of time<sup>5</sup>.

**Put-Call Parity** The relationship between the put and call values of a European option on a non- dividend paying stock of a traded firm can be expressed as  $PV(E) + C = S + P$ .  $PV(E)$  denotes the present value of a risky debt with a face value equal to exercise price  $E$ , which is continuously discounted by  $\exp(-rT)$  at a risk-free interest rate  $r$  over  $T$  number of years. In our case of a lending transaction, the share price  $S$  represents the asset value of the funded investment available for the repayment of terminal value  $E$ .

**Total Return Swap** A swap agreement in which one party makes payments based on a set rate, either fixed or variable, while the other party makes payments based on the return of an underlying asset, which includes both the income it generates and any capital gains. In total return swaps, the underlying asset, referred to as the reference asset, is usually an equity index, loans, or bonds. This is owned by the party receiving the set rate payment.

Total return swaps allow the party receiving the total return to gain exposure and benefit from a reference asset without actually having to own it. These swaps are popular with hedge funds because they get the benefit of a large exposure with a minimal cash outlay.

In a total return swap, the party receiving the total return will receive any income generated by the asset as well as benefit if the

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<sup>5</sup> At its 4th meeting on 26 July 1995, the Islamic Instrument Study Group (IISG) passed a resolution permitting the use of call warrants on the condition that the underlying shares of the warrants in question are Shari'ah compliant. This instrument fulfils the features of mal (asset) according to Islamic jurisprudence as outlined in the haq maliy and haq tamalluk principles. Haq maliy can be traded if it complies with Islamic principles and conditions of buying and selling.

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price of the asset appreciates over the life of the swap. In return, the total return receiver must pay the owner of the asset the set rate over the life of the swap. If the price of the assets falls over the swap's life, the total return receiver will be required to pay the asset owner the amount by which the asset has fallen in price.

For example, two parties may enter into a one-year total return swap where Party A receives LIBOR + fixed margin (2%) and Party B receives the total return of the S&P 500 on a principal amount of \$1 million. If LIBOR is 3.5% and the S&P 500 appreciates by 15%, Party A will pay Party B 15% and will receive 5.5%. The payment will be netted at the end of the swap with Party B receiving a payment of \$95,000 (\$1 million x 15% - 5.5%).

#### **Wa' ad<sup>6</sup>**

A "Promise" thus is non-binding. It is also unilateral therefore both parties can choose not to make good their promise. Under Shari'ah, because of the unilateral nature of the promise, the details of the promise are not as carved in stone as any other contract. Those restrictions do not apply to the contract of Wa' ad, where in other contracts the details such as time of delivery, the price, terms of payment and goods specific description are strictly adhered to.

And because of its flexibility, the Wa' ad is now being noticed as a key alternative to structuring a lot of substitute products of a conventional bank. It is expected that the contract will grow more

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<sup>6</sup> According to the resolutions of SAC, regarding the process of issuing Mudarabah Khazanah Bonds, two Shari'ah principles were approved, namely:  
(a) Principle of Bai` Muzayadah – bidding process; and  
(b) Principle of Ittifaq Dhimni – it is a documented agreement between parties involved prior to sealing any official contract. Based on the resolution of the SAC above, it is clear that the two Shari'ah principles play the same role in the process of securities futures trading, as in the process of Khazanah bonds. The only additional issue involving Shari'ah basis in the process of securities futures trading is the promise or wa' ad .

prominent in the next few years as demand for easy and flexible products increased.<sup>7</sup>

**Forward Contract** is an exchange in which both price and delivery are deferred to an agreed - upon date. Such a transaction can be a form of *bay al-kali'*, which Muslim scholars unanimously consider to be illegal<sup>8</sup>; or it can be structured where the bank guarantee does replace the full price payment, then this is an actual (salam) sale and is, therefore, legally enforceable.

**Forward Pricing<sup>9</sup>** The price of creating and canceling units is equal to the net asset value per unit at the next valuation. This means that each unit price created and cancelled will only be known at the end of the transaction day.<sup>1011</sup>

**Urbun<sup>12</sup>** It is a deposit given by the buyer to the seller in a buying and selling contract. If the sale proceeds, the deposit will be part of the price of the goods. Otherwise, it will be considered as Hibah (gift) from the buyer to the seller<sup>13</sup>.

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<sup>7</sup> According to al-Zarqa', a promise is initially not a burden to the person who makes it and also, it does not give any rights to the other party who has been promised.

<sup>8</sup> Hammad, N. (1990), *Dirasat fi Usool al Mudnynat*, Dar Al-Farooq. (Arabic)

<sup>9</sup> Shari'ah stipulates the need to know the price to avoid niza' (dispute) and Gharar. If both parties to the contract agree on the basis that must be used in determining price according to the certain mechanism, then the issue of niza' and Gharar can be solved.

<sup>10</sup> Securities Commission, Guidelines on Unit Trust Funds.

<sup>11</sup> Al-Jaziriy, *Kitab al-Fiqh 'Ala al-Mazahib al-Arba'ah*, vol. 2, p. 165. Al-Dharir, *al-Gharar Wa Atharuhu fi al-'Uqud fi al- Fiqh al-Islami*, p. 271.

<sup>12</sup> Although there were two opposing views to this method of trading, the SAC concluded that the concept of bai` `urbun is permissible and can be developed as an instrument in the Malaysian Islamic capital market. It has been a common practice in any society to pay a deposit in a business transaction so that the parties involved will not lose their rights within a certain given period. This does not contradict Shari'ah principles because it is `urf sahih to ensure the smooth running of a muamalah. Bai` `urbun is permissible because the hadith of the Prophet s.a.w. which indicates the prohibition is weak.

<sup>13</sup> Nazih Hammad, *Mu`jam al-Mustalahat*, p. 196. Al-Zuhaili, *Al-Fiqh al-Islami*, vol. 4, p. 448. Al- Zarqa', *Al-Madhkal al-Fiqhi*, vol. 1, p. 495.



## Options<sup>14</sup>

independent financial contracts that are traded for a price have no clear-cut parallel in the classical Islamic theory of contracting. Some contemporary scholars, such as, Abu Sulayman, Kamala, who have attempted an evaluation of such contracts, have used a generic term, al-ikhtiyarat, a variant of the term al-khiyar. which normally is the classical Fiqh concept for various kinds of embedded options, as mentioned above. Some key issues involved in an evaluation of conventional options are discussed below.

## Khiyar-al-Tayeen (Option of Determination)<sup>15</sup>

Khiyar al-ta'yeen is similar to khiyar al-shart in many respects. It implies an option to choose the object of sale from out of multiple varieties of a given article. As in khiyar al-shart, such an option

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<sup>14</sup> Some scholars have justified the permissibility to options by drawing a parallel with bai al-urbun. Urbun refers to a sale in which the buyer deposits earnest money with the seller as a part payment of the price in advance but agrees that if he fails to ratify the contract he will forfeit the deposit money which the seller can keep. A call option is similar to bai al-urbun in the sense that the seller does not return the premium or advance payment to the buyer in case the latter does not exercise the purchase option and does not confirm the contract. The followers of Imam Ibn Hanbal however, find this kind of transaction Islamically permissible. Imam Hanbal considered this hadith to be weak and validated urbun based on the practice of Caliph Umar.

<sup>15</sup> Khiyar al-tayeen may be stipulated in transactions pertaining to exchange of commodities and hence, may prove useful for Islamic banks in their Murabaha transactions. As discussed earlier in section 5.1.2.1 an Islamic bank by stipulating khiyar al-shart in its purchase contract with the supplier can easily manage the risk that its client might fail to honor its commitment to purchase the specified article. By combining khiyar al-shart with khiyar al-tayeen for itself in the purchase contract with its supplier, the Islamic bank can now make an offer of option to its client to choose from among three varieties of the article. This would greatly reduce the risk of default.

5.2.1.2. Similarly khiyar al-tayeen may be stipulated in ijara contracts. The Islamic bank can now offer multiple ijara proposals with varying rental structures with or without the lessee taking possession of the assets. This would greatly enhance the flexibility to either or both the parties.

5.2.1.3. In portfolio management khiyar al-tayeen can offer exciting possibilities. Given the widely varying and dynamic nature of investor needs and their ability to bear risk, Islamic funds can now offer double-option or triple- option portfolios to the investor community. Investors may be offered to subscribe to an equity fund concentrating on a geographic region or market or sector, but with an option to switch between a growth, growth-cum-income, and income portfolio. The option could also be to switch between an actively-managed and a passive portfolio or between funds concentrating on cyclical and defensive industries. An interesting case is of the recently introduced Islamic Multi-investment Fund by Faisal Finance, a subsidiary of the Dar al Maal al Islami Trust. The fund offers two equity choices: emerging markets equity and global equities. It also offers a choice between an

may be stipulated in the contract and continue for a specified time period. This option has the benefit of widening the domain of choice for the parties to the contract and may be stipulated and held by the seller or the buyer.<sup>16</sup>

## INTRODUCTION

Financial Engineering refers to "the use of risk management strategies to manipulate the shape of risk profiles one firm is facing (Kotby 1990, p. 107). Kotby is pioneer in introducing this topic to Islamic bankers and Muslim economists. Since the study was completed in a non-Islamic environment (Japan), the author is credited for presenting (at least some of) principles of Islamic Economics. Such attempts will hopefully bridge the gap in awareness on the part of non-Muslim economists and practitioners.

The author should be also credited for drawing the attention of Muslim economists and bankers to this growing and constantly-changing field. We have to admit that theory and practice of Islamic Economics are, in many aspects, not catching up with contemporary<sup>17</sup> Economics and Finance.

Integrating the above two goals with a careful discussion of the Islamic legality of several financial instruments is conducted in this study. In the following sections I present an overall and newly developed approach of this industry. We will identify the key elements

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aggressive Islamic Market Opportunities Fund and a moderate Trade Finance Portfolio for the less and more risk-averse investors respectively.

<sup>16</sup> Based on report in New Horizon, May 1998, p13

<sup>17</sup> I am referring to the conventional gap that originally exists between the Islamic economy and the western financial system.

and controversy among Muslim scholars and jurists on diversified financial innovations and instruments. Special attention then is given to forwards and options since they are considered among the basics of the financial engineering derivatives and trade strategies while facing the challenges of keeping such instruments Shari'ah compliant.

Among the important problems facing Islamic banks, according to many semi converted Islamic banks<sup>18</sup>, are: Excess liquidity and diminishing rate of return over time. As a result I saw a need for financial instruments, with greater emphasis on options, in order for Islamic banks to better manage the excess liquidity. Moreover; I discussed the legality of several financial instruments from an Islamic point of view. I have argued that options and forward contracts are Islamically permissible. The notion of ***“Financial Engineering and Risk Transforming Instruments”*** has been used in that regard.

The Islamic Banking and Finance without built-in-provisioning for social, ethical and moral ingredients are most likely to be submerged in the mainstream of western conventional Banking system and consequently in the wave of market economy operating through western materialistic and secular values. This is perhaps what is happening either consciously or unconsciously in the case of operation of Islamic Banking in corporate sector.

The establishment of Islamic Development Bank and a number of local Islamic Banks and Investment Companies in the 70s' through 90s' are, among others, one of the major historic developments in the first quarter of 21st Century. Despite their point of contact are feudal capitalist system in many Muslim countries, the impact of Islamic banks is felt both in Muslim and in several Western countries. A number of Western conventional banks including some multinational giants, World Bank and IMF have taken serious note of Islamic financing techniques and gathered considerable experience in this area.

Despite their importance for financial sector development, derivatives are few and far between in countries where the compatibility of capital market transactions with Islamic law requires the development of Shari'ah-compliant structures. Islamic finance is governed by the Shari'ah, which bans speculation, but stipulates that income must be

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<sup>18</sup> I am referring to Banks in Islamic countries where they mix conventional (non-Islamic) products with Shari'ah compliant products

derived as profits from shared business risk rather than interest or guaranteed return. This paper explains the fundamental legal principles of Islamic finance, which includes the presentation of a valuation model that helps illustrate the Shari'ah-compliant synthetification of conventional finance through an implicit derivative arrangement. Based on the current use of accepted risk transfer mechanisms in Islamic structured finance, the paper explore the validity of derivatives from an Islamic legal point of view and summarizes the key objections of Shari'ah scholars that challenge the permissibility of derivatives under Islamic law. In conclusion, the paper delivers suggestions for Shari'ah compliance of derivatives.

Shari'ah compliance rules have been developed for equity, debt and securitization products and are in the process of being extended to structured products and examined for derivatives as well. Rules to determine Islamic compliant operations have also been developed for the banking, broking, investment management and advisory services.

It is only when risk exceeds a certain level that a transaction is considered illegal. This "significance level" is difficult to quantify, and certainly doesn't have to be 0.5 for all transactions.

The concept, however, greatly helps understand why some contracts (e.g. bay al-kali') are prohibited in Islam. This, in turn, facilitates evaluating different kinds of modifications, like the one suggested by Kotby, before they can be considered legal. To operationalize these concepts, consider the following example.

### **A Hypothetical Example**

Suppose, for the sake of argument, that the minimum acceptable probability by which a transaction can be completed successfully is 65%. If probability of success drops below 65%, the transaction is considered to involve Gharar, and is therefore illegal. Suppose also that, in a salam arrangement, the probability that a seller will deliver a specified commodity on an agreed-upon date is 70%. Then the probability that exchange

will be completed is, obviously, 70%, and hence the transaction is acceptable. Next, suppose that the buyer wishes to defer the price in addition to delivery (i.e. have a forward arrangement). Suppose the probability that he will pay the price on the specified date is also 70%. What is the probability that the transaction will be completed? It is  $(0.7)^2 = 49\%$ . Risk rises exponentially, and the transaction is not acceptable any more. In this example, therefore, the forward contract involves Gharar, but the salam contract doesn't. Now suppose that the buyer provides a bank guarantee, and the probability that the bank will be able to honor the guarantee is also 70%. Then the probability that exchange will take place is  $(0.7+0.7-0.49)(0.7) = 63.7\% < 65\%$ . Although the guarantee does improve the probability of success, it is still less than the acceptable level. That is, the bank guarantee could not replace full price payment.

The above example indicates how the economy becomes increasingly unstable, with ever rising inflation rates, as promises become the dominant form of payment. With this concept clear in mind, it is striking how phrases of the Prophet (Allah Blesses him and gives him peace) and rules of the Shari'ah addressed this issue more than 1400 years ago. Consider the following rules (see e.g. Al-Darir 1990)<sup>19</sup>:

- 1. A trader is not allowed to Sell what he doesn't have.***
- 2. A trader is not allowed to sell a commodity unless he possesses it.***
- 3. Bay al-kali' is illegal.***

The common factor between these prohibited transactions is that they rely critically on promises. Hence, we can recognize a valuable principle behind these rules: Minimizing the dependency of exchange on promises. This conclusion is strengthened when we know that the Prophet (peace be upon him) used to seek refuge from al-maghrim (Bukhari). According to Ibn Hajar, al-maghrim is "what one is obliged to discharge, like debt." (1988, 11:181). This interpretation clearly includes all types of promises to pay or deliver in a future date. But that doesn't imply necessarily that any contract with a future commitment is illegal. In fact, we know that the Prophet did allow salam and bay al-Ajil.

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<sup>19</sup> Al-Darir, M. (1990), Al-Gharar wa Atharuhu fi al-Uqood, Dar Al-Jeel. (Arabic)

Commitments provide a secure environment for economic activities, and there is nothing objectionable, in principle, about that. But when commitments are too risky and therefore become mere promises, fragility, instability, and inflation start to dominate whatever positive aspects are associated with such promises. Although Shari'ah sets the rules by which productive commitments can be distinguished from risky promises, it's a real challenge to Muslim economists today to uncover these rules in order to be able to apply them to contemporary financial transactions.

A trader who sells what he doesn't have or possess is, in effect, promising to sell. Given the short horizon of the contract (which distinguishes it from salam, see Al-Darir 1990<sup>20</sup>), the risk involved is too high to tolerate. The same principle explains why a salam contract is legal while a forward is not. In the former, a unilateral commitment is involved, and benefits from the contract usually exceed the risk of default by the committed party. In the latter, there is nothing but promises, and both parties are vulnerable to risk of default. Although there might exist some benefits from such an arrangement, these benefits, from the Shari'ah point of view (as evidenced by the Ijma' on forbidding bay al-kali'), are outweighed by the risk involved. The level of such risk apparently reaches the threshold of Gharar, and therefore cannot be tolerated. The same principle can also explain why a bank guarantee cannot replace full price payment. Adding another promise to a transaction consisting merely of promises doesn't make any essential difference.

In my opinion, prohibition of bay al-kali' is not an isolated rule. Rather, it is an element of a coherent theory that sharply distinguishes Islamic Economics from Capitalism. Without a theory that can consistently explain the structure behind these Shari'ah rules, they would appear at a first sight scattered and unrelated, and can be therefore easily dismissed one after one.

Malaysia is the first Islamic country to have demutualised its exchange, Bursa Malaysia Berhad, and list on its own bourse. Bursa Malaysia Berhad, listed on 18 March 2005, represents a single consolidated group comprising equities, derivatives and offshore markets. In October 2007, Malayan Banking Berhad (Mabank) launched a structured

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<sup>20</sup> Al-Darir, M. (1990), *Al-Gharar wa Atharuhu fi al-Uqood*, Dar Al-Jeel. (Arabic)

Islamic deposit product (STRIDE-I) linked to two types of commodity futures, i.e., copper and wheat. STRIDE-I is marketed as a Shari'ah compliant capital-protected deposit with a four year maturity period, based on BBA-Murabahah contract and wa' ad arrangement. The proposed RM300 million closed-end fund would invest in Negotiable Islamic Debt Certificates (NIDC) for capital protection (when held until maturity); as well as copper futures on the London Metal Exchange (LME) and wheat futures on the Chicago Board of Trade (CBOT) respectively. The investment in the commodity futures uses wa' ad arrangements. Bursa Malaysia Derivatives Berhad and Malaysian Derivatives Clearing House Bhd (MDCH) are under the Bursa Malaysia Group.

## **ISLAMIC FINANCE AND STRUCTURED FINANCE**

Based on the above put-call parity replication of state-contingent payoffs of underlying asset performance, any form of Islamic finance could be considered a structured finance transaction, which contains implicit derivative elements with unilateral deferral of settlement and a double coincidence of obligations.

Structured finance encompasses all financial instruments – other than individual (basic or exotic) derivative contracts – that serve to hedge any activity beyond the scope of conventional forms of on-balance sheet securities (debt, bonds, equity). They either (I) combine traditional asset classes with contingent claims, such as derivative claims on commodities, currencies or receivables from other reference assets, or (ii) replicate traditional asset classes through synthetication or new financial instruments (Jobst, 2007a). Structured finance offers the issuers enormous flexibility to create securities with distinct risk-return profiles in terms of maturity structure, security design, and asset types, which allows issuers to provide enhanced return at a customized degree of diversification commensurate to an individual investor's appetite for risk. Hence, structured finance contributes to a more complete capital market by offering any mean variance trade-off along the efficient frontier of optimal diversification at lower transaction cost. However, the increasing complexity of the structured finance market & the ever growing range of

products being made available to investors, invariably create challenges in terms of efficient assembly, management and dissemination of information.

The flexible nature of structured finance straddles the indistinct boundary between traditional fixed income products, debentures and equity on one hand and derivative transactions on the other hand. Notwithstanding the perceivable ostensible difficulties of defining structured finance, a functional and substantive differentiation informs a useful demarcation between the most salient properties of structured and conventional forms of finance as regards the role of Islamic finance. The following definition reflects such a proposition if we compare two cases:

**a)** Investment instruments are motivated by the same or similar financial objective from both the issuer's and the investor's point of view, but differ in legal and functional implementation (transaction structure/security design/repayment profile) and substantive. They also might require a different valuation<sup>21</sup>.

**b)** Investment instruments are motivated by the same or similar financial objective and are substantively and functionally equivalent (i.e. they share a close equilibrium price relation), but differ in their legal classification.

## **EXPLICIT DERIVATIVES” IN ISLAMIC STRUCTURED FINANCE CREDIT RISK TRANSFER**

There is wide agreement that derivatives with the option of unilateral deferment (and attendant contingency risk), such as delayed payment contracts on existing assets (*salam*) or purchase order *Murabahah* contracts on future assets (*Istisna*), concur with Shari'ah

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<sup>21</sup> Pure credit derivatives are clear examples of structured products, which allow very specific and capital-market priced credit risk transfer. Credit insurance and syndicated loans share the same financial objective; however, they do not constitute an arrangement to create a new risk-return profile (and possibly unfunded) from existing or future reference assets. In the same vein, mortgage-backed securities (MBSs) and (Pfandbrief-style) covered mortgage bonds represent different functional and legal methods of securitization with the same financial objective. Although both refinancing techniques convert homogenous pools of mortgage claims into negotiable securities, they represent two distinct forms of debt securities issued on the same type of underlying reference asset either off-balance sheet (asset-backed securitization) or on-balance sheet (covered mortgage bond)



principles. However, the deferment of obligations by both parties to a future date is considered tantamount to a debt exchange without underlying asset transfer, which implies the possibility of profit-taking and excessive uncertainty (*Gharar*) of a kind that is not permissible under Islamic law.

However, the prevalence of Shari'ah-compliant securitized issuance (in combination with hedging transactions) demonstrates the possibility of mutual risk transfer mechanisms with a view to foster *hala l* in the spirit of distributive justice and the consideration of public interest (*Maslahah*). In conventional structured finance, the two major asset classes of capital market-based risk transfer (except loan sales, asset swaps, and natural hedges through bond trading) include asset securitization (which is mostly used for funding purposes) and credit derivative transactions (as hedging instruments), which permit issuers to devise almost an infinite number of ways to combine various asset classes in order to both transfer asset risk between banks, insurance companies, other money managers and non-financial investors in order to achieve greater transformation and diversification of risk.

Since most Islamic financial products are based on the concept of asset backing, the economic concept of asset securitization is particularly amenable to the basic tenets of Islamic finance. Asset securitization describes the process and the result of issuing certificates of ownership as pledge against existing or future cash flows from a diversified pool of assets ("reference portfolio") to investors. It registers as an alternative, capital market-based refinancing mechanism to diversify external sources of asset funding in lieu of intermediated debt finance based primarily on the risk assessment of securitized assets. The implicit risk transfer of securitization does not only help issuers improve their capital management, but also allows issuers to benefit from enhanced liquidity and more cost efficient terms of high credit quality finance without increasing their on-balance sheet liabilities or compromising the profit-generating capacity of assets. Investors in securitization have a wider choice of high-quality investments at their disposal, whose market valuation engenders greater overall efficiency and liquidity of capital markets. The tradability of securitized asset risk also facilitates the synthetic

assembly and dynamic adjustment of asset portfolios via secondary markets according to investor preferences.

In the wake of rapid growth of the Islamic finance sector<sup>22</sup>, structured finance instruments have been receiving increasing attention in Islamic countries owing in large part to enabling capital market regulations, a favorable macroeconomic environment, and financial innovation aimed at establishing Shari'ah compliance.

As one form of structured finance, Islamic securitization transforms bilateral risk sharing between borrowers and lenders in Islamic finance into the market-based refinancing of one of the three broad types of Islamic finance (asset, debt, and equity-based) as reference asset. In its basic concept, Islamic securitization allows originators sell existing or future revenues from lease receivables (asset-based), “sale-back profit” (debt-based) or private equity from a portfolio of Islamically acceptable assets to a special purpose vehicle (SPV)<sup>23</sup>, which refinances itself by issuing unsecured securities to market investors, which assume the role of a “collective financier” whose entrepreneurial investment does not involve guaranteed, interest-based earnings. In this context, investors represent the “capital market corollary” to a singular lender in ordinary Islamic finance. Irrespective of religious conditions, Islamic securitization offers the same economic benefits conventional structured finance purports to generate, such as the active management of designated asset portfolio due to greater control over asset status, enhanced asset-liability management and term structure transformation, as well as the isolation of certain assets in order to make them self-financing at a fair market.

Although the religious prohibition of the exchange of debt and the required conferral of ownership interest to participate in business risk still poses challenges to the development

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<sup>22</sup> The outstanding stock of shari'ah assets worldwide has been increasing by an average of 15 percent a year since 2003 and stood at about U.S.\$500 billion at end-2006, about half of which is held by Islamic banks. Global volume could increase even faster in response to surging demand from Muslim investors flocking to the growing number of competing Islamic investment products.

<sup>23</sup> In conventional securitization, a SPV is set up solely for the purpose of the securitization and might be a trust, limited liability company, partnership, or a corporation. In Islamic securitization, the objectives set out in the constitutional documents of the SPV also must not infringe on the prohibition of riba and haram under Islamic law.

of Islamic securitization, the gradual acceptance of Islamic investment certificates, so-called Sukuk bonds, represents a successful attempt to overcome these impediments based on the adequate interpretation and analogical reasoning of Shari'ah principles applied in Islamic finance. Sukuk are Shari'ah compliant and tradable asset-backed, medium-term notes<sup>24</sup>, which have been issued internationally by governments, quasi-sovereign agencies, and corporations after their legitimization by the ruling of the Fiqh Academy of the Organization of the Islamic Conference in February of 1988<sup>25</sup>. Over the last five years, the Sukuk has evolved as the most popular form of securitized credit finance within capital market-based Islamic structured finance, reconciling the concept of securitization and principles of the Shari'ah law on the provision and use of financial products and services in a risk-mitigation structure subject to competitive pricing<sup>26</sup>. The Accounting and Auditing Organization of Islamic Finance Institutions (AAOIFI) currently recognizes 14 different types of Sukuk, which are traded on the Scrapples Securities Trading System (SSTS)<sup>27</sup> in Malaysia. Gross securitized issuance of these Islamic debt securities has nearly quadrupled over the past two years, rising from U.S.\$7.2 billion in 2004 to over U.S.\$27 billion in 2006 – but still only little more than one tenth of conventional securitized issuance of asset-backed securities (ABS) in emerging markets over the same time period. During the first half of 2007, greater standardization triggered a further uptick of issuance volume to more than U.S.\$10 billion. According to recent market reports governments and corporate will raise about U.S.\$30 billion in Sukuk k over the next three years, bringing the size of the Islamic securitization market to U.S.\$100 billion.

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<sup>24</sup> Investment Sukuk are certificates of equal value representing undivided shares in ownership of tangible assets, usufructs and services or (in the ownership of) the assets of particular projects or special investment activities. (AAOIFI Standard No. 17).

<sup>25</sup> Although there is no formal obligation of compliance associated with the ruling, it carries considerable weight with most Islamic financial institutions.

<sup>26</sup> Only appropriate Islamic bodies, so-called Shari[ah boards, may adjudicate the shari'ah compliance of the terms of any Sukuk issuance.

<sup>27</sup> The SSTS is a system operated by the Bank Negara Malaysia (BNM)'s real time gross settlement/delivery-versus-payment system through which sovereign and unlisted corporate bonds are registered, cleared, and settled via the Real-time Electronic Transfer of Funds and Securities (RENTAS), Malaysia's scripless book-entry securities trading and funds transfer system. SSTS also maintains securities accounts for financial institutions.

Sukuk notes convey equity interest to (capital market) investors in the form of a call option on partial or complete ownership of underlying reference assets, including the right to some calculable rate of return as a share of profit (secondary notes) and the repayment of the principal amount (primary notes). Similarly to mortgage pass-through except investors own a portion of the underlying assets that collateralizes debtor repayments. However, the scrutiny of securitized collateral is more complicated and less accurate when there is a requirement for Shari'ah compliance of assets. Most Islamic finance products require issuers to originate own Islamically acceptable assets (rather than buy asset pools in the market) due to the absence of eligible collateral assets.<sup>38</sup> Moreover, the comparative paucity of historical data on defaults hinders reliable estimates for recovery rates used in pricing and rating tranche products, and leads rating agencies to use very conservative assumptions, especially if lender credit scoring and infrastructure are not up to the standards usually sought by the rating agencies.

## **SHARI'AH COMPLIANT CONSIDERATION**

The underlying Islamic securities comply with Islamic legal rules. This is normally certified upon issuance by the respective Shari'ah advisor/s. The equity stocks or indexes comply with Islamic legal rules. Normally, the Islamic stock screening criteria by various recognized bodies are used to ensure Shari'ah compliance.

The derivative instrument, generally the "call option" is structured in accordance with Islamic legal rules. Normally `Urbun contract is used to create a Shari'ah compliant call option. Alternatively, a wa' ad arrangement can also be used to achieve a similar effect.

When markets are characterized by violent swings in prices, the entire resource generating process may be adversely affected. Present day markets in commodities, currencies, stocks, bonds etc. are indeed characterized by a high degree of volatility. As such, derivative products (options and futures as independent contracts) which enable market participants have become quite common place in global financial markets.

The heterogeneity of scholastic opinion about the Shari'ah compliance of derivatives is largely motivated by individual interpretations of the Shari'ah and different knowledge

about the mechanics of derivative structures. Many policy makers, market participants and regulators are frequently unfamiliar with the intricate mechanics and the highly technical language of many derivative transactions, which hinder a more comprehensive understanding and objective appreciation of the role of derivatives in the financial system and their prevalence in a great variety of business and financial transactions.

While Islamic regulators have a natural interest to err on the side of caution when attempting to resolve religious impediments to the use of derivatives under Islamic jurisdiction, they have come to realize the numerous benefits of derivative markets. Risk diversification through derivatives improves stability at all levels of the financial system and enhances general welfare. Derivatives also contribute to continuous price formation, enhance liquidity management and supplement cash markets at lower funding cost. Last but not least, as a critical element of capital market development, derivatives ensure an efficient transmission of funds from lender to borrowers while enhancing sound financial planning and financial stability. The absence of suitable risk transfer mechanisms under Islamic law, however, deprives financial institutions of this array of these advantages.

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