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# DERIVATIVES IN ISLAMIC FINANCE: THE NEED AND MECHANISMS AVAILABLE FOR ISLAMIC FINANCIAL MARKETS

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# **Derivatives in Islamic Finance: The Need and Mechanisms Available for Islamic Financial Markets.**

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## **ABSTRACT**

The research is an attempt to have an overview of the need of derivatives and their possible role in Islamic Finance stressing on the Shariah qualification and prohibitions on the controversial conventional derivative products. This research focuses on the derivative products and the role they serve from risk management measures. It is an attempt to analyze and understand the exact need for derivatives in providing depth and risk management not risk mitigation measures. Islamic Financial industry has shown tremendous growth over the past decade but the management of risk is still an unresolved issue amongst practitioners in this trillion dollar Shariah compliant industry. The paper attempts at having a continuous elaboration on the four categories of derivatives Forward, Futures, Options and Swap from a conventional perspective and closest alternatives that are available in Islamic finance as proposed by scholars and practitioners. The author's findings suggest that conventional derivatives in their original form do not comply with Shariah norms and parameters. But in contemporary literature and thought there exists Shariah compliant mechanism and instruments which provide if not exact but similar risk management measures for Islamic financial markets.

**Keywords:** Derivatives, Islamic Finance, Financial Markets, *Shariah* norms and parameters.

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## **1. INTRODUCTION**

With the recent financial crisis and global economic slowdown much ado has been given to derivatives. A lot of hue and cry has enthralled this category of instruments and the pitfalls they have. An aspect that has been overlooked much has been the reason for development of these instruments and their rise in the mainstream financial systems.

Before dwelling into the specific types of derivatives, we would like to clarify that this paper focuses on the derivative instruments from a risk management perspective and NOT for any other perspective. As the wise saying goes, “Don’t blame the instrument but blame the user.” Derivatives can be explained as a financial asset whose value is dependent on an underlying asset or a known variable. In the modern day finance the use of derivatives is increasing at an exponential rate.

Major categorization of derivatives as how they will be discussed in this paper as well is forwards, futures, options and swaps. The major benefits credited to the growth are the ease of use, as they are much more convenient for trading purposes than the underlying asset itself, which is understandable as a derivative contract is easier to trade in an organized exchange rather than for instance, an underlying huge quantity of wheat or any other commodity.

Looking at the history of derivatives they were introduced for a noble purpose of managing risk and hedging open financial exposures of genuine needs. But the unfortunate part is that they have become the most famous, and the most used instrument for arbitrage and speculative activity.

This paper is organized in the structure where following section will shed some light on the need based evolution of derivatives. It is followed in Section 3 with a quick overview of the main Shariah transaction principles. The understanding of Shariah transaction principles is evident for the following section which provides Shariah scholars opinion on Derivative contracts. Section 5 gives a detailed overview of possible Shariah compliant derivatives which can be employed for risk management perspective, followed by author’s conclusion and plausible recommended future course of action required.

## 2. EVOLUTION OF DERIVATIVES IN CONVENTIONAL FINANCE

The evolution of derivative instruments has been a result of product innovation; an innovation which was fuelled in response to increasingly complex needs and demands of the fast growing and evolving economic system. As business environments became increasingly sophisticated, new and better financial products were needed to manage changed needs. Every newly evolved product provided increased benefits and 'value added' over existing products in the derivative markets. The evolution based on complex financial engineering and advanced levels of econometrics. In this section we try to examine the evolution of financial derivatives and how each step down the evolutionary chain led to value added products. Though derivatives are a widely encompassing term, we restrict our discussion here to the three main instruments namely Forwards, Futures and Options.

### 2.1 Forward Contracts

A forward contract in its basic terms is a contract where two parties undertake to complete a transaction at a future date but at a price determined today. Due to the difficulties of transport and communication, trading based on samples in ancient times was common and some form of forward contracting was essential. The contracting process usually involved only the producers and consumers of the goods being traded.

### 2.2 Futures Contracts

In the evolution of derivatives the next stage is the transformation from forwards to futures contracts. The introduction of futures contracts was a result of enhanced need to manage risk. Futures contracts have clear benefits over the forwards in refinement which is evident from the popularity of futures in modern world.

*A futures contract is essentially a standardized forward contract .Standardized with respect to contract size, maturity, product quality, place of delivery etc.* The forward contract in its form and substance carried three major problems which were solved by the introduction of future contracts.

- **Double Coincidence:** For a forward contract, the interested party A needs to find a counterparty which has the opposite needs with respect to the underlying asset but also same requirements with regards to timing and quantity. Thus, a number of factors will have to coincide before a forward contract could be drawn up.

- Future contracts being standardized products could be traded on an exchange, which in turn increases liquidity and therefore reduces transaction costs. With the exchange as a medium and a central place, the problem of double coincidence of wants is easily overcome.
- **Pricing:** Normally the pricing of a forward contract is arrived at through mutual consent based on negotiation. There lies an inherent problem in this mechanism as with the imbalance between the bargaining positions of both the parties, it is possible that a forward price is forced upon by one on the other. Exchange trading of future contracts also resolved the problem with forward contracts, that of being possibly locked into an unfair price. With the multitude of market participant, the price discovery mechanism is refined and a fair price prevails in the market.
- **Credit and Counterparty Risk:** Probably the most important issue with forward contracts is counterparty risk of default. Default risk in forward contracts arises not so much from ‘dishonest’ counterparties but from increased incentive to default as a result of subsequent price movement.

In a futures exchange, the exchange being the intermediary ‘guarantees’ each trade by being the buyer to each seller and seller to each buyer. This transfer of risk to the exchange by parties to the futures contract has to be managed by the exchange which now bears the risk. The exchange minimizes the potential default risk by means of the margining process and by daily marking to market.

### 2.3 Options

With the growing business needs and evolving economic and trade mechanisms, where futures had resolved much of the major issues and reservations that forward contracts carried they were still inadequate in some respects. To narrow down the focus, there were two inadequacies that stimulated the search for further product innovation.

- While futures enable easy hedging by locking in the price at which one could buy or sell, being locked-in also meant that one could not benefit from subsequent favorable price movements.
- Futures and Forwards are unsuited for the management of contingent liabilities or contingent claims. These are liabilities or claims on a business entity that *could* arise depending on an uncertain outcome. In an increasingly turbulent world such situations have become commonplace and their management that much more important.

The solution to this was the cause of innovation and the development of the option contracts. All exchange traded options come in two types - Call Options and Put Options. A Call option entitles the holder the right but not the obligation to buy the underlying asset at a predetermined exercise price or anytime before maturity. A Put option on the other hand entitles the holder the right but not the obligation to sell the underlying asset at a predetermined exercise price at or before maturity. Since options provide the right but impose no obligation, the holder need only exercise if it is favorable for him to do so. This non obligation to exercise provides increased flexibility and is the key advantage of options over forwards or futures. The buyer of the options pays for this privilege by paying the seller a nonrefundable premium. The maximum possible loss to a buyer of an option is therefore limited to the premium he pays. This loss occurs if he chooses not to exercise the option. In most other respects, trading methods, contract specifications etc., and the exchange trading of options is similar to that of futures.

### **3. *SHARIAH* TRANSACTION PRINCIPLES**

Before dwelling into the debate on opinion of the Shariah scholars on conventional derivative contracts and the Shariah compliant alternatives, a detailed analysis needs to be taken of the very principles of Islamic Financial transactions.

Under the broad perspective of Islamic Capital Markets, where derivative transactions fall into the Islamic financial instruments need to follow the axioms of *Shariah* and Islamic Law. From the viewpoint of contemporary scholars like Kahf, any Islamic financial instrument or transaction has to undergo strict screening and abide under the principles of (i) Consent, Aptitude, (ii) Balance, (iii) Moral commitment / Ethical Foundation, (iv) *Shariah* Permissibility and (v) Realism.

#### **3.1 Consent/Aptitude:**

It is a general principle that is defined in common law as well as in the Islamic law which defines the legality and the right to contract and enter into transaction. These are common between all legal systems and societies, although there are variations in their minute details, For instance the Islamic law defines the civil aptitude for financial contracts as age 18 in

addition to sanity, some states or countries carry the age limit to 21. Even though the age 18 is normally followed around the world in most Muslim countries, but this does not have any prove from the sources of *Shariah*. Moreover this age limit as the basis of conducting financial transactions and for any instrument being valid is mainly derived from the customary practices at the later stage of Islamic history during the time when the law was being interpreted and developed by the later era jurists like Abu Hanifa, Shafi etc.

### **3.2 Balance:**

This covers a very important principle that any transaction or any instrument of it is invalid if the balance of negotiability and influential power was compromised. Basically explaining the premise that no party should be able to coerce or influence during the negotiation of the pricing and any other aspect of the transaction. Any contracts or dispositions made under coercion and imbalance amongst the parties involved is considered as void by almost all the Muslim jurists both classical as well as contemporary.

### **3.3 Moral Commitment/Ethical Foundation:**

For an instrument to be acceptable from the viewpoint of being used and contracted in an Islamic Capital Market, the underlying asset should be morally sound. The *Shariah* and also all other divine religion preach about the ethical and moral standards to be followed at every possible instance. This basically implies for the Financial instrument and transactions to be not supportive or even indirectly linked to the business of drugs, alcohol, gambling, environmental degradation, arms and ammunition, pornography and any other activity which falls under the grey areas when ethically and morally screened. The name given in the conventional finance to this is “ethical investment”.

### **3.4 Shariah Permissibility:**

The *Shariah* permissibility refers to the standard that all financial instruments should pass to be considered halal, or be acceptable by the Muslim community as in accordance with the Islamic Law. At a primary level all financial instruments and transactions must be free of at least the following five items<sup>3</sup>; (i) *riba* (usury), (ii) *rishwah* (corruption), (iii) *maysir* (gambling), (iv) *gharar* (unnecessary risk) and (v) *jahl* (ignorance).

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<sup>3</sup> M. Fahim Khan (1996), Islamic Futures And Their Markets, Research Paper No. 32, Islamic Research And Training Institute - IDB

**3.4.1 *Riba*:** *Riba* is literally defined as increment, an addition and augmentation. Islam, like all other monotheistic religions, prohibits *Riba*<sup>4</sup>. The prohibition of *Riba* in Islam is given in strong and clear-cut terms.

وَمَا آتَيْتُمْ مِّن رَّبًّا لِّيرْبُوَ فِي أَمْوَالِ النَّاسِ فَلَا يَرْبُو عِنْدَ اللَّهِ

**And whatever ye lay out as *Riba*, so that it may increase in the property of (other) people, it shall not increase with Allah. (Quran 30:39)**

The Quran has been specific about the *riba* it has prohibited; it refers to an increment in a specific transaction, “the” *Riba* that was common and known among the Arabs and other nations at the time of revelation. The two types of “*riba*” that were in practice at that time, were the deferment of an existing debt with an increment to it, and also the simple loan contract with an incremental payback. A major controversy or a wrong interpretation is that the profit is not even allowed in Islam, but the following verse clearly excludes profit in a sale from under the purview of “*riba*”.

ذَلِكَ بِأَنَّهُمْ قَالُوا إِنَّمَا الْبَيْعُ مِثْلُ الرِّبَا وَأَحَلَّ اللَّهُ الْبَيْعَ وَحَرَّمَ الرِّبَا

**That is because they say: “Sale is just like *Riba*,” but Allah hath permitted sale and forbidden *Riba* (Quran 2:275)**

**3.4.2 *Rishwah* (Corruption):** As evident by the very word, any kind of corruption in any contract or any Islamic financial instrument is not permitted. As earlier mentioned, the concept of “ethical investment” and morality is one of the principles that the instrument needs to confirm with.

**3.4.3 *Maysir* (gambling):** *Maysir* from a financial instrument viewpoint would be one where the outcome is purely dependent on chance alone, as defined in the modern day word “gambling”. Why Islam prohibits this is as explained in the view of jurists the game of chance does not give a reason for the transfer of wealth from one party to another. Also an instrument dependent on a chance does not serve economic purpose and gives rise to speculation which is prohibited as it may exploit and harm a party.

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<sup>4</sup> Monzer Kahf, Maqasid al *Shariah* in prohibition of *Riba*, IIUM International Conference on Maqasid al Shari’ah, August 8-10, 2006



**3.4.4 *Gharar* (unnecessary risk):** *Gharar* is one of the most important causes of invalidity of any contract or financial instrument. According to Sarakhsi, “*Gharar* takes place where the consequences (of a transaction) remain unknown<sup>5</sup>.” From the viewpoint of Islamic Financial instruments it can be referred as that there is uncertainty from one or both parties about the underlying asset.

**2.4.5 *Jahl* (ignorance):** As earlier mentioned it is unacceptable from compliance to *Shariah* viewpoint that one party may gain advantage out of the ignorance of the other party. Both the counterparties should be well aware, of what the instrument of financial transactions they are undertaking. With the element of “*jahl*” it borders on exploitation which results in the very contract being void under majority of jurists’ viewpoints.

### **3.5 Realism**

The principle of Realism focuses on the fact that all contracts and instruments in Islamic finance must be founded on real transactions, rather than presumed ones. At multiple instance jurists have raised queries about all instruments which are based on assumptions, and the concept of “IF”. Basically any financial instrument to be deemed in line with the Islamic law needs to represent an actual real transaction.

## **4. SHARIAH VIEWPOINTS ON DERIVATIVE CONTRACTS**

### **4.1 *Shariah* viewpoint on Forward Contracts**

One of the very principles of *Shariah* Law of Contracts is that a seller cannot sell an asset which he does not possess at the time of sale. This principle in turns nullifies any contract in which the subject matter does not exist at the time of contracting. Based on this premise some of the traditional writings talk about the impermissibility of the forward contract in the scenario that the seller does not possess the underlying asset.

A major opinion is that for a contract to be valid one part of the contract is done at time zero. For instance the delivery of commodity and the exchange of the money, at least one is done at time zero. This is based on the principle and the other accepted contracts in Islamic Finance like *Salam* and Deferred Sale. A forward contract falls under the category where both are

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<sup>5</sup> Mohamad Siddiq Dar, *al Gharar fi al-Uqud wa Atharuhu fi al tabiqat al Muasirah*” p.10

deferred. Out of the four possible types of contracts the forward contract becomes impermissible on this factor.

	Spot	<i>Salam</i>	Deferred	Forward
Payment	Now	Now	Later	Later
Delivery	Now	Later	Now	Later

Very few scholars in a detailed review of the structure of the forward contract in conventional finance, opionate that a forward contract is not a contract at the time of initiation but in reality it is a commitment to buy and sell at a future date. In the *Shariah* law, the commitment is referred to as “*wad*”. Based on this a proposed structure which is highly debated is later presented.

#### 4.2. *Shariah* Viewpoint on Futures Contract

In the available literature on the *Shariah* perspective on futures contracts and the permissibility of their trading or not, most of the scholars they put forward two main reasons for prohibition of futures contracts in Islamic Finance.

1. *Shariah* is clear on the very principle that a sale or a purchase cannot be effective in a future date. There is a hadith (saying quoted) from Prophet Mohammad (pbuh) that such transactions are not permissible. A futures contract is where delivery of money and commodity as well are to be done in a future date.

2. The second reasoning that is put forward is the intention of entering into a future contract. In most of the futures transactions delivery of commodity or their possession is not intended. In most cases, these transactions are closed with settlement of difference in prices, more precisely it is used for speculation purpose, and speculation being some sort of gambling as it is perceived, and therefore, forbidden in Islam.<sup>6</sup>

Other renowned scholars have come out very strongly in prohibiting the futures contracts in Islamic Finance, Mufti Taqi Usmani point of view is in conformity with the earlier two mentioned principles. In his words, “*Firstly, it is a well-recognized principle of the Shariah that sale or purchase cannot be affected for a future date. Therefore, all forward and futures transactions are invalid in Shariah. Secondly, because in most of the futures transactions,*

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<sup>6</sup> A. Salehabadi, & Aram, M. "Islamic justification of derivative instruments," International Journal of Islamic Financial Services 4, no. 3 (2002)

*delivery of the commodities or their possession is not intended. In most cases, the transactions end up with the settlement of difference of prices only, which is not allowed in the Shariah”.*<sup>7</sup>

In Fahim Khan’s writings we find a slightly positive opinion in the words, “*we should realize that even in the modern degenerated form of futures trading, some of the underlying basic concepts as well as some of the conditions for such trading, are exactly the same as were laid down by the Prophet (PBUH) for forward trading. For example, there are clear sayings of the Prophet (PBUH) that he who makes a **Salaf** (forward trade) should do that for a specific quantity, specific weight and for a specific period of time. This is something that contemporary futures trading pays particular attention to*”<sup>8</sup>

The debate in the corridors of *Shariah* permissibility of futures contract is still going on and though most of the scholars do prohibit the use of futures and their use in Islamic Financial Transactions, but as how Obiyathulla also emphasizes that at a critical level the major objections to the future contracts are based on individual interpretation of both the *Shariah* and the particular scholars understanding of these instruments.

### **4.3 Shariah view on Options**

The options have been objected upon by the leading scholars like Maulana Taqi Usmani, and Ahmad Muhayyuddin Hasan.

On a deeper insight into the reasoning put forward by the learner scholars varies, and not conformity of opinion is observed. For instance Mufti Taqi Usmani in reply to a set of questions<sup>9</sup> had highlighted in answering a set of questions while an option contract when viewed as a promise is acceptable, charging a fee and trading them are not. Highlighting the sale of a stock with a Put Option to resell the stock to the issuer at a future date, Mufti Taqi Usmani finds it unacceptable citing the presence of a precondition placed on the original sale of stock.

Another contemporary scholar, Abu Sulaymanhas<sup>10</sup> found the option contracts acceptable under the framework of *Bay Al Arbun*. But his conclusion for prohibition of option contracts

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<sup>7</sup> New Horizon, June 1996, Futures Options, Swaps and Equity Instruments, June 1996, pg. 10, 11.

<sup>8</sup> M. Fahim Khan (1996), Islamic Futures And Their Markets, Research Paper No. 32, Islamic Research And Training Institute - IDB

<sup>9</sup> New Horizon, June 1996, Futures Options, Swaps and Equity Instruments, June 1996, pg. 10, 11

<sup>10</sup> Mohd. Hashim Kamali, (1995), Islamic Commercial Law: An Analysis of Options, Paper presented at The Conference On SPTF/Islamic Banking Products, Kuala Lumpur, Dec. 1995

is based on the fact that he opines that options are independent and detached from the underlying asset and therefore the charging of premium by the seller is unjustified.

While analyzing the contemporary writings of scholars on options, a major element of objection that has been raised is *gharar*.

In contrast to the prohibitions, Kamali in one of the extensive research opinion on the matters of derivatives, while analyzing the permissibility of options had highlights “*there is nothing inherently objectionable in granting an option, exercising it over a period of time or charging a fee for it, and that options trading like other varieties of trade is permissible mubah and as such, it is simply an extension of the basic liberty that the Quran has granted...*”<sup>11</sup>

## **5. ISLAMIC FINANCE ALTERNATIVE CONTRACTS IN LITERATURE AND PRACTICE**

After a thorough understanding of why the conventional derivative contracts evolved and what benefits they provide to the user, we now move towards understanding and exploring, financial structures available within the bounds of Islamic finance which serve the same purpose.

### **5.1 Alternative to Forward Contract**

A possible version of the forward contract though still under debate amongst jurists is one based on the concept of *Muwaada*.

The definition of a *muwaada* is two parties performing two unilateral promises on the same subject. As in our illustration earlier, Mr. Ahmed promises to sell the warehouse at \$105,000 to Mr. Ahmed, who also promises to buy at \$ 105,000 in one year's time.

Most Islamic jurists look less favourably at *Muwaada*, compared to *Wad*. We can summarise the two main schools of thought as per below.<sup>12</sup>

School One: AAOIFI, Islamic Fiqh Academy and the majority of scholars. *Muwaada* is only permissible when it can be validly executed. And in the case of forward contracts *muwaada* is frowned upon, with the premise that mutual *wad* which is *muwaada* leads to binding contract, and with the principle of not allowing sale in future that it is not allowed.

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<sup>11</sup> Ibid

<sup>12</sup> <http://www.islamicbanker.com/islamic-contract-law.html>, retrieved on March 25, 2011 at 1230hrs

School Two: Hanafi jurists. Forward contracts can be based on the *Muwaada* principle, as long as there are no other prohibitions (such as excessive *gharar* and short selling).

Based on this debate and as well in the view of Shamsiah Mohamad who is part of a Malaysian central sharia advisory body, *“The issue is one of differing interpretations, whether muwaadah is a contract... My view is that it is not a sale and purchase contract because specific words must be used to enter into a contract in Islam.”*<sup>13</sup>

## 5.2 Alternative to Futures

There is no specific contract which we can identify as being an alternative to a futures contract in Islamic Finance. As earlier mentioned the objections raised by the scholars to the future contracts, one of the major ones is the speculation use and the fact that in the derivative markets, the volume of future contracts is a huge multiple of the actual value of underlying asset. This issue can be addressed by a simple regulatory framework where the number of future contracts should be based on the actual amount of commodity available, or pledged with the exchange.

The debate doesn't finish here as this purely doesn't make a future contract *Shariah* permissible in the light of the available definite literature. In Malaysia the Crude palm oil futures were allowed<sup>14</sup> based on the principle that if the elements which make the contract void are removed on the basis of *masalaha* it would be permitted. The elements that were considered and a future contract based on the actual commodity with the end result of delivery and the pricing based on pure demand and supply of the commodity is permitted.

In the writings of Ali Salehabadi<sup>15</sup>, where he clarifies the three basic models that can be further researched and engineered upon for the development of *Shariah* Compliant future contracts are:

### a) Based on undetermined concluding contracts.

The futures contract if considered as an obligation to a future transaction that translates to the fact that it is not a bai (sales or purchase) that is effective in a future date. This leads to the fact that since futures contracts are obligations to a future sales and purchase, and not a sale,

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<sup>13</sup> <http://www.arabianbusiness.com/muwa-adah-valid-for-forward-forex-contracts-scholar-342721.html> retrieved on March 21, 2011 at 2300hrs

<sup>14</sup> SAC allowed in eleventh meeting on 26 November 1997.

<sup>15</sup> Islamic Justification of Derivatives, International Journal of Islamic Financial Services Vol4 No.3 by Ali Salehabadi and Mohammed Aram

then it cannot be governed under the principles and requirements of a bai framework where a future effective date makes it void.

**b) Based on compromise (*solh*)**

Compromise contract is a form of contract that two parties agree on delivery of money and commodity in the future date.

Imam Khomeini as a grand Ayatollah and distinguished faghih (Islamic science scholar) has passed a judgment on this effect that futures transaction that is not permissible in the bai framework is permissible in the compromise framework, however, because we define the futures contracts as those that two parties compromise on a future transaction, seller agrees to deliver the commodity in a future date to the buyer and buyer agrees to pay money to the seller at that time. And as such futures contracts in the form of *solh* are permissible.

**c) Based on *Jualah***

*Jualah* is a form of contract where the buyer announces that if seller delivers the commodity at a determined time in the future, he/she will deliver an amount to him/her (*see Section 3.4 for further detail*). With this framework it is indeed possible to structure a future contract based on the *Jualah*. Accordingly the futures transaction in the framework of *Jualah* is therefore permissible. Dr. Shirin Kunhibava has proposed a model for a future contract based on this framework. Her model in simple graphical terms is as follows.



A: Service Completed by the delivery of the commodity by agent

B: Promise by principal

C: Promise by principal

D: Service Completed by the delivery of the commodity by agent

**5.3. Alternative to Options**

Conventional options are treated as independent contracts under the financial contracts umbrella, which has created the consensus of opinion amongst scholars on the impermissibility of charging for it.

As Obiadullah (2005) highlights that options can however be used as an embedded option in contracts. The Islamic law of contracts and does keep the window of embedded options in contracts of exchange under the umbrella of *al khiyar*.

*Al khiyar* generally in Islamic literature refers to a specific right to either one party or both parties have to rescind the contract.

Under the Islamic framework *al-khiyar* is a legal contract not based upon mutual consent but is based on equity of the contract and transaction. The introduction of *al khiyar* or an option in a Sharia permissible exchange contract is allowed to help reduce *gharar* or bring it within Islamically acceptable limits.

Under the *Shariah* options are classified into the following: *khiyar al-shart* (option by stipulation); *khiyar altayeen* (option of determination or choice); *khiyar al-ayb* (option for defect); *khiyar al-ruyat* (option after inspection); and *khiyar al-majlis* (option of session).

Legal circles in Islamic finance have a consensus regarding the permissibility of *khiyar al-shart*. There is also a general agreement on the question of granting this right to a third party when, for instance, individual A purchases a commodity from individual B subject to the condition of ratification of the purchase by individual C.<sup>16</sup>

As Obiadullah (2005) argues all contracts involving exchange of counter values either from one end or both, and which are inherently cancelable at any later date, may contain an option. Under this light options are permissible in leasing (*ijara*) and guarantee (*kafala*). In debt transfer (*hawala*), there is a difference of opinion regarding the permissibility of such options. In a pledge (*rahn*) contract, the pledgee always holds the right to annul the contract and there is no need for any additional stipulation for him. An option may however, be stipulated for the pledger.

For the element of risk management the *khiyar al shart* contract can be utilized by banks to manage their exposures and protect them from unnecessary risk. Obaidullah (2005) suggested mechanisms for how the *Murabaha* contract can utilize *khiyar al shart* to mitigate risk.

*Murabaha* is the most common contract on the asset side of a bank's balance sheet. In a *Murabaha* contract the bank buys the asset and sells at a profit to the customer. This exposes the bank to the subsequent to purchase by the Islamic bank from the original supplier; it may not be in the interest of the client any longer to buy the same from the bank. To manage this Islamic bank can retain an option (*khiyar al shart*) for itself from the original seller. Subsequently if the bank's customer fails to buy the asset from the bank, the bank can

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<sup>16</sup> M. Obaidullah , "Islamic Financial Contracts", (2005)

exercise the option and return the asset to the supplier. In the realistic sense the Islamic bank would have to settle for a lesser profit since the original supplier may charge a higher price for as sale with return option as compare to a binding sale without option.

On a deeper look at the last mentioned angle, the price increment that the original supplier may demand can be considered as the cost of the option that he gives the buyer. It implies that the value of the option is embedded in the price that the bank pays.

#### **5.4 Alternative to Swaps**

An Islamic Profit Rate Swap serves something of the similar purpose as that of a conventional rate swap. An Islamic institution or an entity may be exposed to variable profit rate or fixed profit rate which they might want to change according to their needs and preference.

Within the parameters of the current Islamic financial markets the Islamic profit-rate market, are transacted via *Murabaha* structure and *musawamah* structure<sup>17</sup>

On a deeper look at the two versions, both contracts seem to be based on *Murabaha* transactions. The difference in the two versions is that, in the first one based on *Murabaha*; the investor knows the cost upfront as the principle of *Murabaha* transaction goes that the price needs to be fixed. On the other hand in the case of *musawamah* based contract, the cost is unknown and only on the date of execution after the cost has been calculated the *musawamah* is implemented.

To further illustrate the steps in the process, let us assume, that XYZ Corporation has recently bought a cement manufacturing plant using the *ijarah* contract, with the rental payments being half yearly for 3 years, calculated at 6 Month Libor + 0.50%, of the notional cost of 100 Million RM.

The analysts and management is concerned regarding any increase in the Libor as well as the fact of variable cost. This is a major concern to the bank, as now the Libor is at 4.5% bringing the cost to 5% of notional cost. In case the Libor goes to 5% that would raise the cost majorly for the company XYZ.

The Islamic Profit rate Swap Contract operates in quite a similar structure superficially as a conventional interest rate swap. It is the actual transaction which makes the transaction in compliance with the *Shariah* principles of transaction.

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<sup>17</sup> The Concept and Operations of Swap as a Hedging Mechanism for Islamic Financial Institutions, Dr. Asyraf Wajdi Dusuki, Shabnam Mokhtar

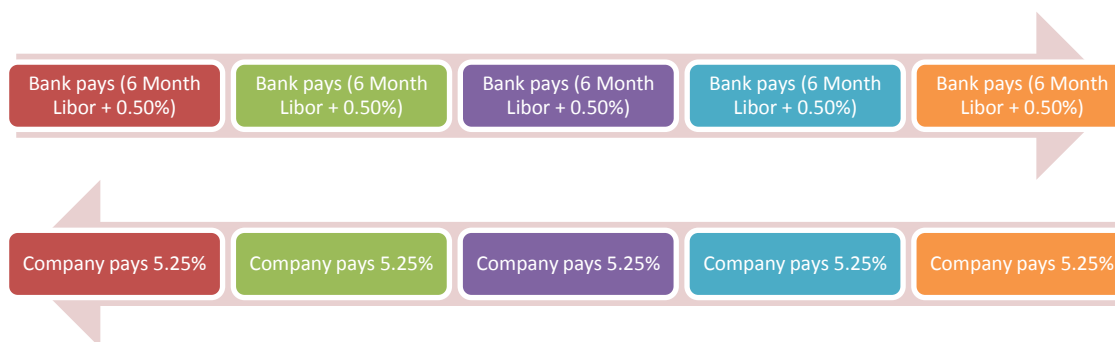


**Stage 1 Initiation:** A Profit Rate Swap contract is initiated by the use of *wad* or promise from the investor (XYZ Corporation) to conduct a series of *Murabaha* or *musawamah* transactions. The need for *wad* arises mainly to ensure no party will withdraw from the transaction and to safeguard both parties.

In case of *musawamah* version the counterparties are required to give unilateral *wad* to ensure there are two independent promises that are not linked or based to each other and do not fall under *muawada* category.

**Stage 2 Swap Period (Transaction):** During the transaction period of the swap agreement, the XYZ Corporation needs to pay a floating rate every six months, and that is what it is hedging. In the swap agreement XYZ Corporation enters into an agreement to buy from than bank a commodity under a *Murabaha* agreement with deferred payments. In the modern day Islamic Banking the commodity normally used is through brokers at London Metal Exchange. This leg of the Swap transaction entitles the XYZ Corporation to pay fixed half yearly payment which in our example 5.25% annual of the notional cost.

The other leg of the Swap transaction is more complex as the bank cannot buy an asset with variable cost to be determined over the course of the swap agreement using a *Murabaha*. In this case sequential *Murabaha* agreements are conducted, with an underlying *wad* from the Bank to purchase the commodity in parts in a sequence. The price of the commodity is determined using a reference rate for profit markup for every new sequential *Murabaha* agreement on the date of execution.



**Stage 3 Muqassah (Net Settlement):** At the date of settlement which in the case of our illustration is every 6 months, neither party pays each other in reality the amounts, instead a net settlement is paid to one of the parties. For instance, at the end of first half, the Company owed the Bank @ 5.25% annual profit markup which translates to 2.625 Million

RM. The Bank needs to pay (6 Month Libor = 5%) + 0.5% which means a payment of 2.725 million RM to the company.

In reality only the difference will be paid by the Bank to the Company which is hundred thousand RM. The debate on if it is permissible by *Shariah* or not is out of the scope of the paper, but in documentation and legal perspective the transaction is considered as full payments by both parties.

## **6. DERIVATIVE FEATURES AMONGST ISLAMIC CONTRACTS**

Under the radar of *Shariah* compliant instruments there exist contracts which have the elements and characteristics which can be considered basis for derivative contracts. The following section will delve into the structures of the few implicit and explicit derivative like contracts under the umbrella of Islamic transactions.

### **6.1 Salam Contract**

*Salam* contract under the fiqh rules is a transaction between two parties to for sale/purchase of an underlying asset at a predetermined future date but at a price determined and fully paid for today. The seller in a *Salam* contract at the initiation of the contract agrees to deliver the asset in the agreed quantity and quality to the buyer at the predetermined future date. It is similar to a conventional futures contract however; the big difference is that in a *Salam* sale, the buyer pays the entire amount in full at the time the contract is initiated. One of the critical elements under Islamic jurisprudence also stipulates that the payment must be in cash form.

The concept of prepayment in this contract has direct benefits for the economic activity as a *salam* contract help needy farmers and small businesses with working capital financing. In the practical application of this contract in the modern financial system the buyer is often an Islamic financial institution. With the clause for full prepayment, a *Salam* sale has clear liquidity benefits for the seller, resulting in the predetermined price to be normally lower than the prevailing spot price. This price behavior is a contrast from that of conventional futures contracts where the futures price is typically higher than the spot price by the amount of the carrying cost. The lower *Salam* price compared to spot is the “compensation” by the seller to the buyer for the privilege provided.

The *salam* contract is subject to several conditions, including the following:<sup>18</sup>

1. Full payment by buyer at the time of effecting sale.
2. The underlying asset must be standardizable, easily quantifiable and of determinate quality.
3. Quantity, Quality, Maturity date and Place of delivery must be clearly enumerated in the *Salam* agreement.
4. The underlying asset or commodity must be available and traded in the markets throughout the period of contract.

**6.1.1 *Salam* contract and Conventional futures:** In reference to discussion regarding future and forward contracts in earlier sections, the current conventional future contracts are similar to the *Salam* contract in all the conditions except, the full prepayment by the buyer. The following table addresses the five conditions for a valid *salam* contract as earlier mentioned in comparison to the conventional derivative

	Conventional Future Contract	<i>Salam</i> Contract
Full prepayment	Contradicts	Conforms
Standardizable Asset	Conforms	Conforms
Confirmed Quality and Quantity	Conforms	Conforms
Maturity Date defined	Conforms	Conforms
Asset must be available in market	Conforms	Conforms

### **6.2 *Bay Al Arbun*:**

*Bay Al Arbun* is a sale with an earnest money deposited by the buyer with the seller as a part of the price. The payment of this earnest money is as an advance payment and is with the condition the settlement conditions:

- If the buyer continues with the contract within the stipulated time period, the earnest money becomes a part of the price negotiated already.
- In the case the buyer decides to cancel the transaction or decide not to go ahead with the sale, the earnest money is forfeited by the buyer. The deposit money can be kept by the seller.

<sup>18</sup> Obiyathulla I. Bacha, (1999), Derivative Instruments and Islamic Finance: Some Thoughts for a Reconsideration, INTERNATIONAL JOURNAL OF ISLAMIC FINANCIAL SERVICES, Vol. 1, No. 1, April – June 1999.

**6.2.2 Bay Al Arbun and Conventional Derivative:** The similarities between *Bay Al Arbun* and a traditional call option are stark and obvious. But one of the major differences is the fact that the deposit money in *Bay Al Arbun* becomes a part of the price of the contract while in the case of a conventional call option, the down payment is the price of buying the right to that price. Thus the down payment is not a part of the actual price.

### 6.3 *Istijrar* Contract

*Istijrar* contracts are a more complicated of the Islamic contracts available. An *istijrar* contract involves two parties, the buyer, which in normal practice is usually a company seeking financing to purchase an underlying asset, and an Islamic financial institution.<sup>19</sup> Bacha (1997) describes this contract as a complex combination of options, average prices and *Murabaha* agreements.

Under Islamic jurisprudence *Istijrar* is an agreement under which a buyer purchases something at different time intervals. Each time there is no offer or acceptance or bargain for the contract. Instead there is one master agreement where all terms and conditions are finalized. There are two types of *Istijrar*:<sup>20</sup>

- An *Istijrar* contract whereby the price is determined after all transactions of purchase is complete.
- An *Istijrar* contract whereby the price is determined in advance but the purchase is executed from time to time.

**6.3.1 Mechanism of *Istijrar* Contract<sup>21</sup>:** Under practice in financial sector an *Istijrar* (similar to master *Murabaha* agreement) is signed between the Islamic financial institution and client under which various Sub-*Murabahas* would be extended:

At Time  $T = 0$ :

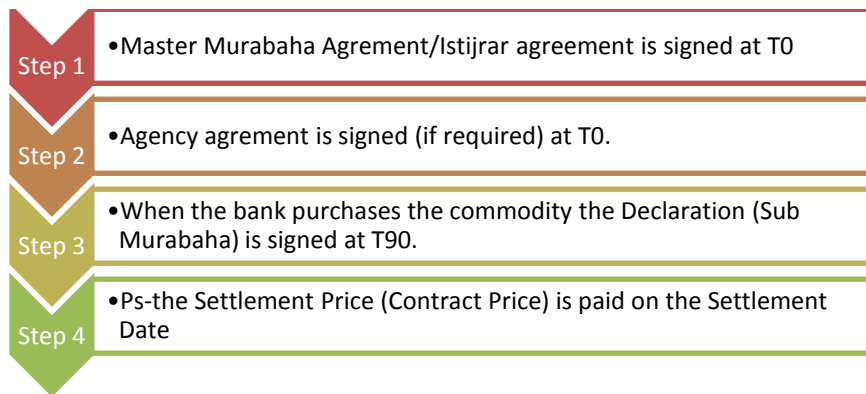
The Master *Murabaha* agreement will describe the following formula for the price range and the *Murabaha* price  $P^*$ : (The inset flowchart shows the process steps)

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<sup>19</sup> Obiyathulla I. Bacha, (1999), *Derivative Instruments and Islamic Finance: Some Thoughts for a Reconsideration*, INTERNATIONAL JOURNAL OF ISLAMIC FINANCIAL SERVICES, Vol. 1, No. 1, April – June 1999.

<sup>20</sup> Dr. Muhammad Imran Ashraf Usmani, (2002), *Meezan Bank's Guide to Islamic Banking*, pg. 135

<sup>21</sup> The process flow has been taken from Obaidullah (1997) and Bacha (1999).



1. The upper and lower range around the cost price  $P_0$  is determined. This price range may be linked to a benchmark such as 'LIBOR+ margin'. Hence the price bound would change when the benchmark shifts.
2. The *Murabaha* price  $P^*$  or the exercise price is set. This is the price which may be applied if the market price of the asset goes above or below the price range during time  $T_0$ - $T_{90}$ .

The period during which the above two call options shall be valid is  $T_0 - T_{90}$ .  
At  $T_{90}$ :

1. When the Sub-*Murabaha* or 'Declaration' is signed at  $T_{90}$ , the sale is executed.
2. The settlement price  $P_s$  is determined at this time.

**Terms Used:**

$T_0$  - Time when Master Murabaha agreement or Istijrar agreement is signed.

$T_{90}$  - Time when declaration is signed

$T_s$  - Settlement Date  $P_0$ - Cost price

$P^*$ - Murabaha Price

$P_s$ -Settlement price

Declaration -- Offer and Acceptance between Customer and Islamic financial institution to sell the asset back to customer.

Settlement price  $P_s$  may be one of the following two:

- Avg price of asset during  $T_0$ - $T_{90}$
- Exercise price fixed by either party after the market price of asset during time  $T_0$ - $T_{90}$  has gone out of the price range. This exercise price may be

the *Murabaha* price  $P^*$  or some other price fixed by either bank or customer.

At  $T_s$ : On the settlement date, the settlement price  $P_s$  is paid as set at time  $T_{90}$ .

- If a number of Sub-*Murabahas* have been executed under the Master *Murabaha* Agreement, then each will be settled according to its own settlement price on the settlement date.
- In order to decrease the price volatility between Declaration Date and the Settlement Date, the duration may be reduced.

## 6.4 *Jualah* Contract

*Jualah* is a contract in which one party undertakes to give a specific reward to anyone who may be able to realize a specific or uncertain required result.

**6.4.1 Elements of a *Jualah* contract<sup>22</sup>:** Most scholars agree that the determination of the required end result of the transaction is considered to be sufficient to make use of *Jualah* permissible.

The elements critical to a valid *Jualah* can be summarized as:

**6.4.1.1 Parties of *Jualah* contract:** The counterparties in a *Jualah* contract are the offeror and the worker:

- The offeror specifies a compensation that would be paid for a specified task in a known or unknown period.
- The worker may be a specified person (s) or it can be a general public

**6.4.1.2 Subject matter and Reward:** The subject matter of the *Jualah* contract is the task to be done, and the reward is the compensation announced by the offeror.

**6.4.1.3 Execution of *Jualah* contract:** *Jualah* can be concluded by an open or informal offer to the public. In the case of an open offer, any person who hears or receives the offer and is interested to do the job may do so, either himself or through the assistance of another person. However, if a *Jualah* contract is concluded with a specified worker, such a worker is obliged to perform the work himself.

## 7. CONCLUSION

With the development of the Islamic finance industry over the past few decades, and in tiring times with the global financial crisis, a lot of new avenues under the ambit of *Shariah* compliant financial instruments have opened up.

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<sup>22</sup> M. Ayub, Understanding Islamic Finance, pg351, Wiley (2009)

A controversial instrument even in conventional finance, the derivatives have crept into the debate of permissibility in the Islamic financial circles. The derivative instruments in its nature are a mere tool for risk management.

Islamic financial institutions must comply with *Shariah* but this does not isolate them from the same risks as their conventional counterparts. They also need to manage their risk not only for their own treasury management, but also to create products that allow their customers to manage risk, for example, in order to reduce an individual's or corporation's exposure to currency risk.<sup>23</sup>

The place of derivatives in Islamic financial institution is well founded under the framework of risk management and nothing more than that. However, the de facto application of many derivative contracts is objectionable due to the blatant *Shariah* conflicts the conventional derivatives carry. Also the potential of speculation to violate the tenets of distributive justice and equal risk sharing is a major eye raiser for the prohibition of off the shelf use of conventional derivative contracts.

As this paper discusses, remaining under the guidelines of *Shariah*, there are tools and instruments which allow the Islamic financial institution to manage their risk exposure in similar ways to conventional finance. This does not mean to use the same instruments.

Islamic financial contracts in their own nature carry some derivative like features and can be further developed into tools and instruments using the basic principles of Islamic law of contracts. This effort is not to develop exotic instruments for the sake of profiteering but for the development of the Islamic finance and bring it to equal footing to compete against the millennium old conventional financial world.

### **Road Ahead – Financial Engineering**

With the ongoing debate on the matter of derivatives and the structures discussed through this research, conventional derivatives in their own existing structures carry elements which violate the principles of *Shariah* law of contracts. Islamic transactions with derivative like natures like *Salam* contract, and *Arbun* that can and do serve as an alternative to the prohibited derivative contracts.

In the modern complex business working environment of today the development of tools for the effective risk management is the need of the hour. Financially engineered products and

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<sup>23</sup> *Lessons from History*, Shahana A., Aun R., Islamic Business and Finance (Nov 2010, Issue 58)

derivatives, such as, futures, option and swaps provide certain benefits to market participants with exposure to certain kinds of risk. IN light of the modern business methods complexity requiring planning and risk management resulting in exposure to fluctuations in prices and rates in markets for commodities, currencies, and other financial assets, the *masalaha* seems to be real and substantial.

With this in light the careful consideration need to be given as in forming the basis of legislation, *masalaha* such as above is to be accorded a lower priority than the Quran, or the Sunnah, or Ijma. Among the various *Shariah* norms the ones that are the most important are a contract needs to be free from *riba*, *gharar* and *qimar* or *maysir*. While a small amount of *gharar* is even tolerable, the prohibition is the strongest on the issue of *riba* and *qimar*. The risk management products would be admissible in the Islamic framework, only if they are free from these elements.

One of the founding principles in banking and finance is that all products are built from four pillars: deposits, exchange, forwards and options. Relying on these very principles, Islamic finance is not much different, and using these four pillars within the ambit of *Shariah*, Islamic derivatives can be worked upon.<sup>24</sup>

A unique and differentiating factor of the Islamic financial system is the asset backed nature, where each financial claim or transaction has an underlying asset. Each financial claim in an Islamic financial system can be considered as a contingent claim whose return/performance depends on return/performance of underlying real asset. As Obaidullah (2005) suggests, “*financial engineering may be applied with a set of asset-backed financial claims to develop instruments synthetically from Shariah-nominate basic contracts like Murabaha and ijara that function as tools of hedging.*”<sup>25</sup>

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<sup>24</sup> *Lessons from History*, Shahana A.,Aun R., Islamic Business and Finance (Nov 2010, Issue 58)

<sup>25</sup> M. Obaidullah , “Islamic Financial Contracts”, (2005), page 200



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