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PRICING OF *BAI SALAM*: AN ANALYTICAL PERSPECTIVE

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ABSTRACT

Bai Salam has gained prominence as an Islamic financial instrument for financing the deficit funding units across the Islamic world. This paper uses the arbitrage-free first order conditions to set boundaries on the *ra's al-mal* (the price paid in *Bai Salam).* Among the four schools of thought (*Hanafi, Maliki, Shafi* and *Hanbali), Hanafi* jurists strictly require, for a valid *Salam* contract, the existence of *al-musallam fihi* (the underlying asset of the *Bai Salam* contract) at the time of contract. This paper proposes that when *al-musallam fihi* exists at the time of contract the *ra's al-mal* must be equal to the current price of the underlying asset plus the holding cost so that there is no arbitrage. For cases where *al-musallam fihi* does not exist at the time of contract, a closed form formula for calculation of *ra's- al-mal* is being proposed. The formula will ensure fair pricing of *Salam* contracts in order to safeguard the interests of *al-musallam alayhi* (the seller of the underlying asset).

***Keywords*:** *Bai Salam*; *ra's al-mal*; *al-musallam alayhi; al-musallam fihi.*

1. INTRODUCTION

Bai Salam is being considered a desirable source of financing for anyone looking for funds to support his business. The *al-musallim* is the owner of capital who have excess funds and who will be buying the commodity. The seller, *al-musallam alayhi*, takes the money from the buyer and will deliver the goods at a future date. The price decided and paid at the contract session for the commodity is known as *ra's al-mal* and the underlying commodity of the contract is *al-musallam fihi*. *Bai Salam* is gaining a wide spread importance. Practitioners and theorists, alike are advocating using *Salam* to fulfill the needs to the economy.

For agriculture, it is used to finance farmers before the harvest time. Kaleem & Wajid (2009) concluded that in the rural sector of Pakistan, if the farmers used *Salam* contracts they could save as much as 25% of the cost and also bypass the middleman who is controlling 90% of the profits.

For small businesses, *Salam* is used to satisfy liquidity and working capital requirements of companies and to foster exports and imports etc. Many banks have also launched *Salam* based products, such as Dubai Islamic Bank's Al Islami *Salam* Finance, Abu Dhabi Commercial Bank's

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Self Employed *Salam* Smart Finance, Pakistan Wasil Foundation's *Salam* based microfinance for small farmers and Pakistan Bank of Khyber's *Salam* among others.

While *Salam* is such a beneficial tool for manufacturers and industrialists to manage their resources, it is also a tool that can lead to manipulation. If not done properly *Salam* can lead to one party benefiting more than the other. This party is usually the buyer of the commodity who also has higher negotiating power and can tend to set a very low *ra's al-mal*. This is especially true for agriculture. The small farmers to fulfill their needs go to the landlords for their agricultural inputs. The landlord gives them the money or the inputs but demands a lion's share of their produce. This is a type of Salam contract. The seller because of his needs may agree at the low *ra's al-mal* and thus play in the hands of the buyer. Because of the uncertainties, local banks do not provide the same service.

This study tends to find limits on *ra's al-mal* that will ensure no arbitrage. Furthermore, we suggest a closed form formula for the pricing of *Salam* contract. The formula will ensure fair pricing of *Salam* contract in order to safeguard the interests of *al-musallam alayhi*, the seller of the underlying asset.

2. LITERATURE REVIEW

2.1. Bai Salam

The *Bai Salam* contract is a *muajjal* (deferred) contract with the *al-musallam fihi* for a commodity being paid upfront and the delivery being deferred to a later date. It is a contract whose legality has been established through holy *Quran, Sunnah, Ijma and Qiyas*. The *Salam* is very different from the normal *Bai* (sales) contract. A *Salam* is a hybrid contract involving both a selling and buying process and a borrowing and lending process.

The sale object, *al-musallam fihi*, must be fully defined, it should be of known type, its quantity should be clear stipulated and it must be available at the end of *Salam* period. *Al-musallam fihi* must not be from a place where there is a limited supply, that is, output or crops from a certain farm as it would involve *gharar* (uncertainty). The *Maliki*, *Shafi* and *Hanbali* rulings demand that the *al-musallam fihi* must be available at the time of expiration of *Salam* contract however *Hanafi* ruling says that *al-musallam fihi* must be available in the market at all times from the start of the contract till delivery. None of the four schools of thoughts (*Hanafi*, *Maliki*, *Shafi* and *Hanbali)* put the condition that the *al-musallam fihi* must be in possession of the seller, as long it is available in the market and the seller can fulfill his debt by buying from the market or providing his own.

However if a metal is *al-musallam fihi* and the *ra's al-mal* is a *salaf* (the loan that draws forth no profit for the creditor) of the same metal, then *Salam* is not possible as it would be a *ribawi* transaction. In such a condition, the cash and commodity transfer must be taken immediately before the two parties leave. There must be an integration of the *Salam* and commodity market as unlike the futures contract, *Salam* contract cannot be dispersed through just cash payment; the delivery is a must. The date and place of delivery of *al-musallam fihi* must also be known (Khan, 1997).

The *ra's al-mal* must be pre-decided and must be written precisely in the contract. Except for *Hanafi*, the major schools of thought believe that the *ra's al-mal* can also be the usage of tangible assets. In this case, the buyer shall drive benefit of his ownership of the tangible asset by transferring the usufruct of his asset to the seller for a limited time. According to *Hanafi*, *Hanbali* and *Shafi* rulings,

the *ra's al-mal* of the *Salam* contract must be paid at the contract session. The *Maliki* gives a leniency of 3 days, only in the case when the buyers do not have the ready cash. The main reason for this strict condition is that in a *Salam* contract, the seller is selling a commodity which will later be owed by the seller to the buyer. If the *ra's al-mal* is also deferred, then it would be *Bai al kal bil kali* (debt for debt), a transaction which is prohibited in Islam (Zaabi, 2010). The *Salam* contract is binding and cannot be rescinded by one party alone, without the approval of the other party. Both parties must agree to abrogate a *Salam* contract; unilateral rescinding of contract from one party can lead to losses for the other party.

2.2. Parallel Salam

Parallel *Salam* option is also available to the financial institutions. As banks do not like taking charge of the *al-musallam fihi* they can enter into two offsetting *Salam* contracts. One possibility is that the bank enters into the parallel *Salam* with its original client, the seller of *al-musallam fihi*. The bank would ask him to enter into another *Salam* with delivery at approximately the same time as the original *Salam* and at a *ra's al-mal* higher than the previous one. Another possibility is that the bank chooses another client who wants to buy the *al-musallam fihi* and enter into a *Salam* contract. This time the bank will take the position of a seller (UNCTAD, 2006). The former is impermissible by some schools as it may require that the two *Salam* contracts to be co-dependent on each other, which is void (Ahmed, 2007).

2.3. Pricing and Risks

Various methodologies have been used to determine the *ra's al-mal* of the *Salam* contract. The main purpose is to set a non-exploitative price that is to be paid up-front. It must be a price known at the time of agreeing on the *Salam* and transferred before leaving the contract so cannot be a future price.

One approach is to equate the *ra's al-mal* with the price in a certain market on the day of the contract. Another possible mechanism is to use the expected price in a particular market as the benchmark and add or subtract a certain premium to reach *ra's al-mal* (Zaabi, 2010). As *ra's al-mal* is prepaid, it is usually lower than the spot price (Bacha, 1999). Alternatively, *Bai Salam* contracting parties agree on the price differential for the *Salam* period and this differential is reflected in *ra's al-mal* (Maurer, 2001).

In conventional finance, the relevant future expected cash flows are discounted to get the present value or the expected price of an item. Islamic Finance does not realize the value of pure time element. In cases of *Salam* and *Bai Muajjal*, Islamic finance allows that the contract price to be different from the prevalent market prices. According to Khan (1991), one possible reason for this is to accommodate the supply and demand differences at different period of time, therefore any time preference cannot be fixed or predetermined, and it must be proportional to time.

A suitable benchmark rate is necessary to price the *Bai Salam*. In many countries, due to unavailability of a good substitute, the interbank offer rates (such as LIBOR, KIBOR etc.) are used as a proxy for Islamic benchmark rate (Ghauri, 2015). Others have suggested possible alternatives, some of which can be applied to *Bai Salam*, for example, the creation of Islamic bank interbank money market, arbitrage pricing theory, *Shariah* compliant asset pricing model or basic cost estimation for usage of funds (Omar et al. 2010).

In the setting of *ra's al-mal* multiple risks are also considered. First of all the price risk has been eliminated as the buyer knows at what price he is getting the *al-musallam fihi* and the seller knows that for what price he is selling for. Any change in market price of the *al-musallam fihi* will not impact either the buyer or the seller.

There is a negotiating risk in setting the *ra's al-mal*. As one party may be in a better bargaining position it is possible that the *ra's al-mal* decided is biased in the favor of one party, the reason for selecting this *ra's al-mal* could be due to urgency, need or information asymmetry. There is also a default risk in this transaction as the seller may not provide the *al-musallam fihi* at the right time or may not provide it at all. This may be because the seller had bad intentions or because of the high negative payoff of the *Salam* contract when the *al-musallam fihi* market price is much higher than the *ra's al-mal.* Even though *Salam* is a binding contract, the recourse is slow, costly and time consuming.

3. METHODOLOGY

Maurer (2002) argues that the financial derivatives are black boxes devoid of all morals and thus a reterritorialization (restructuring) is required to get the investors and modelers out of the world of numbers and would give humans more power to understand and act. We believe that the black box of numbers ensures simple replications of this world. Unlike conventional finance, which is heavily reliant on data and modeling as its backbone, Islamic Finance still relies predominantly on qualitative analysis. The impact of this is that a lot of factors that are justified on the basis of qualitative reasoning are untested from real market data.

For the purpose of this paper, we are only considering *Bai Salam* on commodities.

3.1. Pricing if al-musallam fihi exist at time of Salam

According to the *Hanafi* ruling, it is compulsory that the *al-musallam fihi* is available in the market at the time of the contract for a valid *Salam*. In absence of any convenience yield, transaction and storage costs, whether one receives the physical possession today or at a later time is irrelevant as at the end of the contract period, it is as if the buyer has held the asset for the entire period of the contract. Thus for a T period *Salam* contract, starting in period 0, the prepaid *ra's al-mal* ($RAM_{0,T}$)should be equal to the market price of *al-musallam fihi* (C_0) at the start of the contract period.

$$RAM_{0,T} = C_0 \qquad (1)$$

Arbitrage is possible if this condition is violated. For example, if $RAM_{0,T} > C_0$, then the buyer will first enter into a *Salam* contract and receive $RAM_{0,T}$ and then will go to the commodity market and buy

Table 1: Transaction for a Riskless Profit if $RAM_{0,T} > C_0$

Transaction	Cash flows	
	Time 0	**Time T**
Enter *Salam* Contract	$RAM_{0,T}$	$-C_T$
Buy Commodity	$-C_0$	C_T
Total	$RAM_{0,T} - C_0$	0

al-musallam fihi from the market at C_0. At the end of the *Salam* period, he will deliver what he purchased, to the *Salam* owner. This transaction has led to a riskless profit, worth $RAM_{0,T} - C_0$ at time period 0 as can be seen from Table 1.

Arbitrage is also possible if $RAM_{0,T} < C_0$. In this case, the seller will enter into parallel *Salam* contracts. The seller will first enter into a *Salam* contract and pay $\mathrm{RAM}^{\mathrm{L}}_{0,\mathrm{T}}$ and then will enter into a parallel *Salam* to buy *al-musallam fihi* at $RAM^{H}_{0,T}$, where the market price of *al-musallam fihi* is greater than or equal to higher *ra's al-mal* from the parallel *Salam* contract which is greater than the lower *ra's al-mal* that is, $C_0 \geq RAM^{H}_{0,T} > RAM^{L}_{0,T}$. At the end of the *Salam* period, he will receive *al-musallam fihi* from the first *Salam* contract and deliver to the second contract holder. As can be seen from Table 2, this again yields a riskless profit, worth $RAM^{H}_{0,T} - RAM^{L}_{0,T}$ at time period 0.

Table 2: Transaction for a Riskless Profit if $RAM_{0,T} < C_0$

Transaction	Cash flows	
	Time 0	**Time T**
Enter *Salam* Contract	$-RAM^{L}_{0,T}$	$+\mathrm{C_T}$
Buy Commodity	$RAM^{H}_{0,T}$	$-\mathrm{C_T}$
Total	$\mathrm{RAM}^{\mathrm{H}}_{0,\mathrm{T}} - \mathrm{RAM}^{\mathrm{L}}_{0,\mathrm{T}}$	0

Some commodities are said to be in carry market and it is possible to store them for a certain period of time. When storage is possible, it is usually expensive; for example, *Ijarah* rate on the storage facility is S_0 to be paid in advance. With storage cost, the *ra's al-mal* must be higher. This is because; now the seller must be compensated for the holding cost of *al-musallam fihi*. Thus the *ra's al-mal* is depicted in Eq. (2). This means that for a T period, *Salam* contract of a storable good, starting in period 0, the prepaid *ra's al-mal* $RAM_{0,T}$ should be equal to the market price of *al- musallam fihi* C_0 at the start of the contract period and the present value of the storage cost.

$$RAM_{0,T} = C_0 + S_0 \qquad (2)$$

The seller in the *Salam* contract first receives the *ra's al-mal* and then buys $e^{s\mathrm{T}}$ units of *al-musallam fihi* from the commodity market. Assume the seller stores the commodity for T periods through an *Ijarah* contract which cost him a continuous return of s%. The buyer has bought $e^{s\mathrm{T}}$ units and has to pay a storage cost of $e^{-s\mathrm{T}}$ for the *Salam* period; the net result is that at the end of the *Salam* period he will have exactly enough commodity to fulfill *Salam* requirements. Thus after paying storage cost upfront, the situation as depicted in Table 3 will yield.

Table 3: Effect after payment of Storage Cost upfront

Transaction	Cash flows	
	Time 0	**Time T**
Enter *Salam* Contract	$RAM_{0,T}$	$-C_T$
Buy e^{sT} units of Commodity	$-C_0 e^{sT}$	C_T
Total	$RAM_{0,T} - C_0 e^{sT}$	0

For no arbitrage, $RAM_{0,T} - C_0 e^{sT} = 0$ and

$$RAM_{0,T} = C_0 e^{sT} \quad (3)$$

Eq. (3) is a rewrite of Eq. (2) in continuous time i.e. it is assumed that the *Ijarah* cost is calculated not at a discrete time but continuously over the period of the contract.

Now suppose a commodity generates a convenience yield. In this case, the seller of *al-musallam fihi* will get an additional non-monetary benefit by just holding the asset for the tenure of the *Salam* contract. With convenience yield, the *ra's al-mal* must be lower as the seller is deriving benefit from holding *al-musallam fihi* for the time of the contract. For a *al-musallam fihi* with a present value of convenience yield, π_0, the *ra's al-mal* will be depicted in Eq. (4) as:

$$RAM_{0,T} = C_0 + S_0 + \pi_0 \quad (4)$$

This means that for a T period *Salam* contract of a storable good which gives convenience to holder, starting in period 0, the prepaid *ra's al-mal* $RAM_{0,T}$ should be equal to the market price of *al-musallam fihi* C_0 at the start of the contract period and the present value of the storage cost less the benefit from holding the good throughout the time of the contract.

In case the convenience yield is continuous π% which is proportional to the current market price of *al-musallam fihi*, then the *ra's al-mal* will be depicted in Eq. (5) as:

$$RAM_{0,T} - C_0 e^{(s-\pi)T} \quad (5)$$

An average investor cannot benefit from the convenience yield. Similarly, a bank cannot use the purchased commodity during the *Salam* period and is a party which cannot be benefited from the convenience yield. In such a situation, when one party can benefit from holding the asset during the *Salam* time and another party cannot, the argument of no arbitrage would raise an inequality rather than a no-arbitrage price as depicted in Eq. (6):

$$C_0 e^{(s-\pi)T} \leq RAM_{0,T} \leq C_0 e^{sT} \quad (6)$$

Any investor would face different transaction costs such as trading fees, bid-ask spreads and economies of scale and discounts. For ease of analysis, assume that there is a fixed transaction cost of k for each transaction in the financial markets or commodity market and furthermore there is a bid price C_0^b which is greater than the ask price C_0^a in the commodity market. In such a case, keeping in view the limits on arbitrage, when a person enters into a *Salam* contract and receives the *ra's al-mal*,

Table 4: Effect after payment of Transaction Cost

Transaction	Cash flows	
	Time 0	**Time T**
Enter *Salam* Contract	$RAM_{0,T} - k$	$-C_T$
Buy $e^{(s-\pi)T}$ units of Commodity	$-C_0^b e^{(s-\pi)T} - k$	C_T
Total	$RAM_{0,T} - C_0^b e^{(s-\pi)T} - 2k$	0

he has to pay the transaction cost of k. Then he buys the *al-musallam fihi* for C_0^b and pays k again. The cash flows can be seen in Table 4.

Thus for no arbitrage $RAM_{0,T} - C_0^b e^{(s-\pi)T} - 2k = 0$ and

$$RAM_{0,T} = C_0^b e^{(s-\pi)T} + 2k \quad (7)$$

Eq. (7) generates the value of *ra's al- mal* when transaction cost exists and price of *Salam ra's al-mal* is higher than the bid price. It explains that because of the transaction costs, the *ra's al- mal* will be higher and would incorporate the transaction cost. If this condition is not fulfilled Eq. (8) will hold and an arbitrager can make profit by entering into a *Salam* contract and buying the *al-musallam fihi* at time period 0.

$$RAM_{0,T} > C_0^b e^{(s-\pi)T} + 2k \quad (8)$$

On the other hand, if there is a price mismatch in the *Salam* and commodity market and *ra's al-mal* is less than the current ask price, then a holder who needs the commodity in T periods, can enter into a *Salam* contract to buy the *al-musallam fihi* and simultaneously sell his own holdings at the ask price C_0^a. He will have to pay the transaction cost to enter *Salam* contract and to sell commodities. During the *Salam* period, he can save the storage cost but will lose out on the convenience yield. The cash flows are summarized in Table 5.

Table 5: Effect after saving the Storage Cost

Transaction	**Cash flows**	
	Time 0	**Time T**
Enter *Salam* Contract	$-RAM_{0,T} - k$	$+C_T$
Sell $e^{(s-\pi)T}$ units of Commodity	$C_0^a e^{(s-\pi)T} - k$	$-C_T$
Total	$C_0^a e^{(s-\pi)T} - 2k - RAM_{0,T}$	0

This gives the other limit on arbitrage

$$C_0^a e^{(s-\pi)T} - 2k - RAM_{0,T} = 0$$
$$RAM_{0,T} = C_0^a e^{(s-\pi)T} - 2k \quad (9)$$

Combining the two no arbitrage conditions, given in Eq. (7) and Eq. (9):

$$C_0^a e^{(s-\pi)T} - 2k \le RAM_{0,T} \le C_0^b e^{(s-\pi)T} + 2k$$

Further combining Eq. (6):

$$C_0^a e^{(s-\pi)T} - 2k \le RAM_{0,T} \le C_0^b e^{(s-\pi)T} + 2k$$
$$C_0^a e^{(s-\pi)T} - 2k \le RAM_{0,T} \le C_0^b e^{sT} + 2k \quad (10)$$

The bounds on *ra's al-mal* are depicted in Eq. (10) for no arbitrage and existence of *al-musallam fihi* at the time of the *Salam* contract. If these bounds are ignored, then arbitrage will be possible and someone will be able to make a riskless profit at the expense of others.

3.2. Pricing if al-musallam fihi does not exist at time of Salam

According to *Maliki*, *Shafi* and *Hanbali*, the availability of *al-musallam fihi* at the time of contract is not a necessary condition for the validity of *Salam* contract. In such a case when the *al-musallam fihi* does not exist at the time of *Salam* contract and the price of *al-musallam fihi* at time period 0 is unknown, then the expected price of the future may be discounted to reach at its present value. Eq. (11) depicted the expected price of *al-musallam fihi* $E(C_T)$ and the appropriate continuous T period discount rate α:

$$RAM_{0,T} = E(C_T)e^{-\alpha T} \qquad (11)$$

Arbitrage or essentially quasi-arbitrage is possible if this condition is not met. For example, if a person who enters into a *Salam* contract when the *al-musallam fihi* does not exist at the time of the contract, promises to sell *al-musallam fihi* and receives $RAM_{0,T}$. He can then invest the money received in an Islamic bank at the then applicable return, α.

Table 6: Effect of Arbitrage or Qausi-Arbitrage

Transaction	Cash flows	
	Time 0	**Time T**
Enter *Salam* Contract	$RAM_{0,T}$	$-E(C_T)$
Invest in Bank	$-RAM_{0,T}$	$RAM_{0,T}e^{\alpha T}$
Total	0	$RAM_{0,T}e^{\alpha T} - E(C_T)$

As depicted in Table 6, if $RAM_{0,T}e^{\alpha T} - E(C_T) > 0$, then arbitrage is possible as the person did not invest anything at Time 0 but was still able to make a profit. Similarly, the buyer also has an opportunity. He can borrow from the bank and enter into a *Salam* contract as depicted in Table 7.

Table 7: Effect of borrowing for *Salam*

Transaction	Cash flows	
	Time 0	**Time T**
Enter *Salam* Contract	$-RAM_{0,T}$	$E(C_T)$
Borrow from Bank	$RAM_{0,T}$	$-RAM_{0,T}e^{\alpha T}$
Total	0	$E(C_T) - RAM_{0,T}e^{\alpha T}$

In both cases it can be seen that divergence from Eq. (11) can lead to arbitrage. If there is storage cost and convenience yield involved then, Eq. (12) will be generated as:

$$RAM_{0,T} = E(C_T)e^{(s-\pi-\alpha)T} \qquad (12)$$

Incorporating the convenience yield and transaction cost will result in *ra's al-mal* having the following bounds.

$$E(C_T^a)e^{(s-\pi-a)T} - 2k \leq RAM_{0,T} \leq E(C_T^b)e^{(s-a)T} + 2k \qquad (13)$$

The result in Eq. (13) is analogous to Eq. (10). Sometimes in these markets, the *al-musallam fihi* may not be available at the time of *Salam* contract. In such a case, the expected price shall be calculated at time T using historical price data with the assumption for the price shock distribution. In the case of non-availability of historical bid and ask price data, the historical price data for either bid, ask or average prices may be used. The results state that the *ra's al- mal* will be bounded by the expected present value of the *al-musallam fihi* adjusted for the convenience yield, storage cost and transaction cost. These results also need to be incorporated that the *al-musallam fihi* can be available at some time between time 0 and T, therefore the storage cost and convenience yield of only that time should be incorporated and not for the whole period T of *Salam* contract. These bounds help decrease the negotiating risk as well give a systematic approach to value *Salam* contracts.

3.3. Discount Rate

Appropriate discount rate α, that should be used to calculate the *ra's al-mal* is another point of concern. The price of a forward contract is always larger than a *Salam* contract and the discount rate of *Salam* contract is the forward discount rate compounded by the risk free rate (Murphy, 2003). However, the *Salam* discount rate cannot depend on the risk free rate as Islamic securities cannot make a time based return. Therefore the Islamic investors do not expect to receive the risk free rate, r_f.

A better discount rate should incorporate for the default possibility of the other. This will especially be effective for the *Salam* buyer as he has already paid but if the seller is not able to fulfill his promise, the buyer would lose out on the money. Thus the buyer would require a default risk premium (DRP).

There is also the issue of time premium. While the pure time premium or fixed time based interest cannot be charged, a market premium (MP) should still be given for the changing demand and supply over the time horizon of the *Salam* contract. This would account for both the maturity premium for the length of *Salam* contract and the variation in prices during the *Salam* contract.

Another premium, specifically for a *Salam* contract is the Asset Existence Premium (AEP) which depends on the probability of availability of the *al-musallam fihi* at the time of delivery of *Salam* contract. Furthermore, *Salam* contract is not a liquid contract so the investors require a high Liquidity Premium (LP) as these contracts cannot be rescinded or sold.

Finally, the investors in Islamic instruments also have to pay Piety Premium (PP), as they do not have many alternatives and thus the reaction of Islamic investors to the adverse shock to the system is very different from the reaction of conventional investors (Ellis, 2012). Few people want to enter into Islamic instrument, price identification is an issue and to get an Islamic instrument one might accept a deal at a lower rate than the conventional deal.

In view of the foregoing, the suitable benchmark premium would account for all of these premiums as depicted in Eq. (14):

$$\alpha = DRP + MP + AEP + LP + PP \quad (14)$$

While this formula looks theoretical and difficult to apply with historical prices, for future studies, it might be possible to find the different premium and calculate the value of α.

4. CONCLUSION

The paper aims to give a formal approach to set *ra's al-mal* in a *Salam* contract. The paper shows that there are certain limits in which arbitrageurs cannot benefit from *Salam* contract. It shows that with transaction costs, convenience yield and storage cost, the *ra's al-mal* can be calculated for a market in a standardized format. Furthermore, this paper also suggests conditions on *ra's al-mal* fulfilling the requirements of all four schools of thought (*Hanafi*, *Maliki*, *Shafi* and *Hanbali)* with regard to *al-musallam fihi*. Finally it outlines the characteristics of the Islamic discount rate that should be used. The suggested formula will ensure fair pricing of *Salam* contract in order to safeguard the interests of weak negotiating party. *Salam* contracts using this model can be a product that can help decrease the income inequality of an economy, boost agriculture and small scale businesses. Its applications are far and wide. It can help Islamic economy to remove credit system and increase e-commerce.

REFERENCES

Ahmed, A. G. (2007). *Shariah Opinion (Fatwa) on Istisna', Contracting & Salam.* Manama, Bahrain: Al-Baraka Banking Group, Department of Research and Development.

Bacha, O. I. (1999). Derivative Instruments and Islamic Finance: Some Thoughts for a Reconsideration. *International Journal of Islamic Financial Services, 1*(1), 9-25.

Ellis, T. R. (2012). The Piety Premium of Islamic Bonds. *The Middle East Quarterly, 19*(2), 61- 72.

Ghauri, S. M. K. (2015). Why interest-rate cannot benchmark for Islamic financial product pricing? *Benchmarking: An International JournaL, 22*(7), 1417-1428.

Kaleem, A., & Wajid, R. A. (2009). Application of Islamic banking instrument (Bai Salam) for agriculture financing in Pakistan. *British Food Journal, 111*(3), 275-292.

Khan, M. F. (1991). Time value of money and discounting in Islamic perspective. *Review of Islamic Economics, 1*(2), 25-45.

Khan, M. F. (1997). *Islamic Futures and Their Markets.* Jeddah, Saudi Arabia: Islamic Development Bank.

Maurer, B. (2001). Engineering an Islamic future: Speculations on Islamic financial alternatives. *Anthropology Today, 17*(1), 8-11.

Maurer, B. (2002). Repressed futures: Financial derivatives theological unconscious. *Economy and Society, 31*(1), 15-36.

Murphy, A. (2003). *Practical Financial Economics: A New Science.* Westport, CT: Praeger.

Omar, M., Mohd Noor, A., Meera, A. K. M., Abdul Manap, T. A., Majid, A., Shabri, M., & Sarif, M. A. (2010). *Islamic pricing benchmarking.* ISRA research paper No. 16.

UNCTAD. (2006). *Islamic finance and structured commodity finance techniques: Where the Twain can meet.* Switzerland: United Nation conference on trade and development.

Zaabi, O. S. (2010). Salam Contract in Islamic Law: A Survey. *Review of Islamic Economics, 14*(2), 91-122.