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Tradable Inventory Certificates
A Proposed New Liquidity Instrument

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Abstract

The paper proposes inventory certificates, a new Islamic financial instrument based on inventory of big corporations to be financed and owned by investors. This instrument uses murābaḥah as the underlying contract and accommodates collateral and guaranteed return. It may be issued for short to medium terms. It has a potential important contribution to solving the problems of working capital finance faced by Islamic business institutions in general and liquidity management of Islamic banks in particular. It will also address the dearth of short term investment tools in the Islamic financial markets, providing an instrument which characterized of having stable and low risk returns.

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JEL Classification: G120, G310.
KAUJIE Classification: K1, K13.

1. Introduction

One of the basic principles of Islamic financial system is the entitlement to profit which comes with acquiring ownership of an asset. Based on this principle, a few financial products have been designed which are now commonly issued and traded in Islamic financial markets such as a variety of *ṣukūk* based on *ijārah*, *muḍārabah*,

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etc. The most significant factor distinguishing these securities from non-Sharīʿah-compliant securities, such as bonds, is the nature of asset which is represented by these securities. Sharīʿah-compliant securities represent ownership in real utility-generating assets, goods or usufructs not merely debts.

After the global financial crisis of 2008, liquidity management has become the single most important area for banks (Ernst & Young 2010 (in Ali)) as well as for regulators; Basel Committee on Banking Supervision has extensively addressed the issue in the Third Basel Accord (Basel III). Islamic banks are also in pressing need of efficient and Sharīʿah-compliant liquidity management tools as their profiles have moved towards fewer liquid assets and greater maturity gaps. Unlike conventional banks, interbank market for Islamic banks is not well developed, so this avenue is rarely used for obtaining liquidity by Islamic banks. Commodity *murābaḥah* or *tawwaruq* has emerged as the most commonly used tool for liquidity management in Islamic banks. However, the OIC *Fiqh* Academy, in its 2009 resolution, ruled *tawwaruq* to be non-Sharīʿah-compliant. This ruling presents a challenge for creating Sharīʿah-compliant tools that can fulfill financing needs of individuals and liquidity management needs of business corporations and financial institutions in general, and Islamic banks in particular. The Islamic capital market is still eager to see more securities with variant risk profiles in order to respond to the tremendous needs of Islamic banks for more genuine tools to replace the artificiality of *tawarruq*. These liquidity tools would not only help Islamic banks but also business corporations to fulfill short term financing needs.

The present paper also uses the principle of ownership in assets, along with a combination of Sharīʿah-permissible contracts to propose a structure for tradable inventory certificates. This paper discusses the definition of these certificates and their ability to generate stable returns, followed by some key features a company issuing these certificates should possess. Then the operational mechanism of the certificates is explained with examples using a hypothetical model for profit calculation and distribution followed by a discussion regarding the Sharīʿah-permissibility and tradability of these certificates. Finally a brief discussion regarding risks associated with these certificates and recommendations for expanding the use of these certificates conclude the paper.

2. Tradable Inventory Certificates

2.1. Definition

The proposed certificates may be defined as "certificates of equal value representing ownership of equal shares or percentages of a list of inventory items stored in a warehouse with commitment by the company to gradually buy them, as needed, on *murābaḥah* basis and with *wakālah*-based arrangement to replenish at cost and to distribute profit periodically" (Kahf 456).

The basic mechanism of these certificates is derived from this definition. They represent ownership of the underlying assets, i.e., as these certificates represent inventory, the holder will be owner of the inventory items. Each of these standardized certificates will represent equal share of the underlying inventory. The holders of the certificates will authorize, by way of a *wakālah* agreement, the company (whose inventory is financed by the certificates) to sell the inventory to itself on *murābaḥah* basis and to replenish the inventory as well by purchasing new items from suppliers until the end of the term of the certificates.

2.2. Advantages

The certificates not only provide an alternative financial approach that uses short term financing to purchase inventory but also provide an attractive investment for investors looking for low risk securities with stable returns. This stability is due to transfer of ownership of inventory from the certificate holders to the company by way of *murābaḥah* sale. *Murābaḥah* sale is a sale at a specified profit margin above the declared cost. However, it is used in contemporary Islamic finance jargon for a sale in which goods desired, selected and ordered for purchase by the buyer are bought by an intermediary financial institution from the seller and sold at a pre-agreed markup on a deferred payment basis. The deferred payment may be made in installments or as a lump sum amount. (Iqbal, Mirakhor 17).

Being based on *murābaḥah*, the certificates have several advantages. First, unlike partnership contracts such as *mushārakah* or *muḍārabah*, the underlying contract is sale-based and therefore it offers the certificate holders a guaranteed and pre-known return. Second, in addition to a fixed rate of return, the certificates have the ability to provide variable-at-interval fixed return. Sharīʿah requires the mark-up of a *murābaḥah* contract to be fixed at the time of sale so in cases which involve a single sale transaction, the return or mark-up cannot be changed. Since the operational mechanism of the certificates involves a series of sales over an extended period of

time, the return can be changed at the beginning of each new time-interval to offer a fixed return for all new *Murābaḥah* sales concluded during that interval. At the beginning of each new interval a new mark-up rate is set based on a pre-agreed formula. This can then make the return on investment consistent with current market return and reflective of current market conditions. The intervals can be fixed as quarters, months or weeks depending on the certificate's terms as set in the prospectus.

Murābaḥah contract exposes both the buyer and seller to benchmark rate risk, i.e., while the mark-up rate is fixed at the beginning of sale contract, market rates may change exposing either party to opportunity risk. The ability to vary returns at short intervals, gives corporations the flexibility to issue financing instruments which match their financing strategies.

Similarly, the proposed certificates offer investors return features matching the market return while their preferences for secured principal and a minimum guaranteed return can be satisfied because the certificates represent insurable assets committed to be sold at a minimum guaranteed mark up through *murābaḥah* contracts which, by definition accommodate adequate securities, guarantees and collaterals. Furthermore, a clause is inserted in the prospectus requiring the sale of a minimum number of inventory items to the dealership at specified intervals, irrespective of the sales to customers by the dealership, will ensure a minimum stable return and pay off to the certificates holders.

These proposed certificates are not exclusively a banking product and the issuing mechanism is such that they can be issued without any involvement by an Islamic bank. However, they can play an instrumental role in solving several of the contemporary problems faced by Islamic banks. They can help in solving Islamic banks' liquidity management problems which arise due to a dearth of Islamic money market instruments. The negotiability feature particularly provides Islamic banks additional flexibility in liquidity management. These certificates can also be used as short term investment tools. Very few central banks provide Sharīʿah-compliant overnight financing facilities. This puts Islamic banks at a disadvantage relative to conventional banks. The certificates can be designed on short intervals to reflect changes in market rate of return and used for providing a short-term liquid and secured facility to Islamic banks.

2.3. Prerequisites for Efficient Functioning

For these tradable certificates to work efficiently, for both the investor and the company that needs financing, the company's business cycle and its inventory must possess some key features. First, the company's business should involve tangible assets since each certificate represents ownership of a percentage of actual physical assets whose physical existence should be traceable. Second, the company should have a good inventory management system with history demonstrating that inventory does not pile up. Third, the business should have a stable and predictable cash conversion cycle so that it has a business cash flow that warrants scheduled payments to certificates' holders. Fourth, the amount of financing required should be large enough to warrant issuance, i.e., the costs and efforts associated with issuing the certificates should be outweighed by the benefits of such financing to the company. This method of finance from the public may be used by both private sector and public sector corporations for financing their inventories.

3. Proposed Model

To delineate the proposed model, we will express it as a mechanism for using these tradable certificates by a hypothetical car dealership. The dealership sells imported cars and their parts, therefore these certificates can be used to finance the imported inventory. In this case, an Islamic Bank acting as underwriter, issues certificates and collects funds from investors. A trustee for the certificate holders will act as an intermediary between the bank and the certificate holders and will represent them for matters related to defending their interests.

3.1. Mechanism

The basic mechanism of these certificates can be divided into five steps:

i. Flow of proceeds to finance the import of inventory.
ii. Withdrawal of inventory by the dealer on *murābaḥah* basis from warehouse
iii. Replenishment of inventory.
iv. Distribution of profit to the certificate holders.
v. Amortization of certificates or capital return to holders.

3.1.1. Step 1: Flow of proceeds to finance the import of inventory

Since the purpose of the certificates is to finance the purchase of inventory for the car dealership, the Islamic Bank acting as an underwriter will issue certificates on behalf of the dealership which will represent equal ownership shares in the cars and parts to be purchased and held in the warehouse of the dealership.

The prospectus shall contain all the conditions and rights and obligations for the different parties involved. It will lay down the details of rate of return; what the rate will be and whether it will be fixed or variable at intervals. The mechanism involves repetitive sale contracts of quantities from the inventory executed by the car dealership to itself on behalf of the investors, being appointed as their *wakīl* for selling to itself and also for replenishing from suppliers. The prospectus must clearly state the terms and conditions of such a *wakālah* contract so that the rights of investors are protected. If the investors are not protected from the conflict of interest which may arise in such an arrangement, it may lead to Sharīʿah issues. Since the investors own the inventory, the contractual relationship with the car dealership should be clear and specific about inventory *takāful* insurance, all conditions of the sale contracts as well as the repurchase from suppliers for inventory replenishment. The authority of the *wakīl* must be made sufficiently clear to ensure avoidance of any conflict of interests and to protect the investors in case of abuse, loss or damage to inventory or infringement on investors' rights. The prospectus will also contain commitment by the dealership to purchase the inventory at the specified markup as well as other conditions which guarantee the sale price that includes principal and return as practiced in regular *murābaḥah* to the purchase orderer.

Whether the *murābaḥah* rate of profit will be fixed or floating will also be specified within the prospectus. In case the rate is to be variable at specified intervals, the basis of its determination will be contractually set within the prospectus. For example, if the rate is to be fixed at LIBOR+2% at the beginning of each month or quarter, then these details will be specified within the agreement.

As usual, the trustee will collect funds from the certificate holders and will, in turn, deliver the certificates issued by the Islamic Bank on behalf of the car dealership to the investors making them the certificate holders. Using these proceeds to pay for the desired inventory, the supplier will deliver the required inventory, according to the dealership's specifications and determination of items and quantities. The inventory will then be deposited in the obligor's (dealer's) warehouse as a trusted agent (*wakīl*). At the end of this step, the certificate holders will be owners of the purchased inventory which is held in the obligor's warehouse.

The process of issuance is summarized in the following figure:

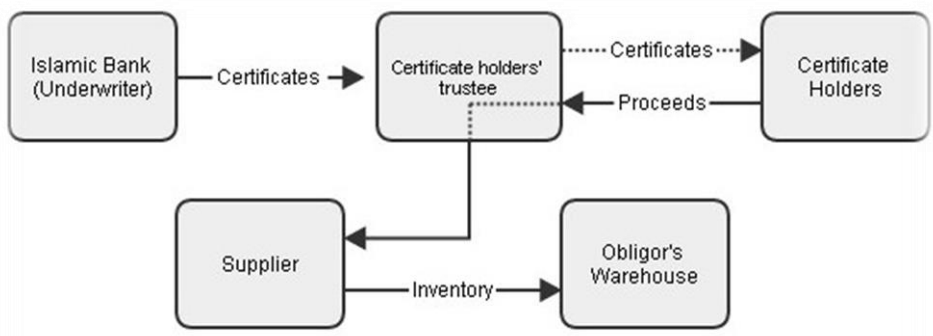

Fig 1 *Showing the issuance of certificates and the subsequent flow of inventory to the obligor's warehouse.*

3.1.2. Step 2: Withdrawal of inventory by the dealership on *murābaḥah* basis from warehouse

The second step will be accomplished by way of a *wakālah* agreement between the certificate holders and the dealership. This *wakālah* will be granted to the dealership by the certificate holders and will be included in the prospectus. Consequently, certificate holders will allow their agent, the dealership, on their behalf to sell to itself and withdraw a part of the inventory from the warehouse. The agent sells a portion of the inventory to itself on *murābaḥah* basis. This will result in the dealership owning the withdrawn part of inventory and being indebted to the certificate holders for the agreed amount (cost plus already declared and agreed profit). Since the dealership now owns the purchased part of the inventory, it can be sold to final customers according to market. Practically, the prospectus either defines a markup or gives a definite way of determining it such as LIBOR+2, for all items/quantities sold to the obligor. The rate of markup to be used can vary depend on the country or region in which the certificates will be issued. An Islamic index, if available and widely accepted, can also be used. The use of LIBOR in the proposed model is based on the rationale that it is already widely used in Islamic financial contracts, is an internationally recognized benchmark and no other comparable benchmark alternative is currently available.

Furthermore, as the certificates are designed to provide periodical profit distribution with or without capital amortization, the maturities of all these

murābaḥah purchases are unified and fixed as the end of the intervals of profit distribution. For instance if the profit is distributed on quarterly or monthly basis, all prices of *murābaḥah* purchases from the inventory shall be due for payment at the end of current quarter or current month and the mark up or profit of each such purchase is then calculated for the number of days from the day of payment of the item's cost when bought from the supplier until the last day of current month or quarter.

3.1.3. Step 3: Replenishment of inventory

According to the terms of prospectus, which in reality is the agreement between the issuer/obligor and certificate holders as established in standard No. 17 of the AAOIFI. The holders will also authorize the dealership to purchase inventory items on their behalf to replenish the stock in the warehouse. The amount of replenishment will be based on the dealership's sales forecast and determined according to the amortization terms of the certificates as stated in the contract (prospectus). The inventory may be replenished by the dealership by virtue of the *wakālah* agreement. In this case, the capital or a part of it may be retained by the dealer to purchase new inventory and only the profit is distributed to the certificate holders through their trustee. The ownership of the newly purchased inventory will remain with the certificate holders until it is sold to the dealership on *murābaḥah* basis. The policy for replenishing the inventory should be determined in the prospectus and may be made subject to minor adjustments to take into consideration any changes in sales forecasts and market conditions.

These steps ii and iii are summarized as follows:

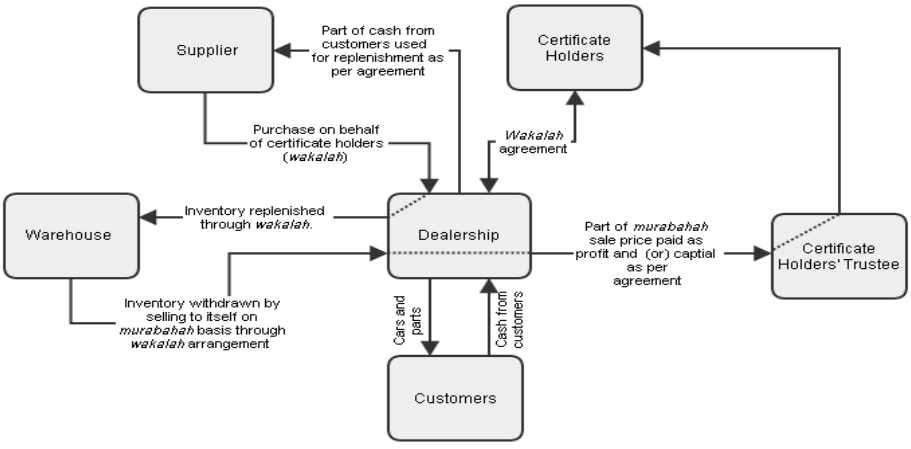

Fig 2. *Showing the transfer of sale and replenishment of inventory and flow of cash and murbahah sale price from the dealer to the certificate holders*

As shown in the figure above, by virtue of the *wakālah* agreement, the dealer will sell to itself inventory items stored in the warehouse through a series of *murābaḥah* contracts. These sales will be made according to a pre-agreed schedule of quantities and dates based on the dealership business plan regarding as and when inventory is required. The schedule of these *murābaḥah* sales may alternatively determine a range of quantities for each period. For instance it may set a minimum and maximum quantity to be purchased by the obligor for each week in order to give flexibility which allows accommodating market variations.

The mark up rate is already determined on the basis of, say, LIBOR plus 2% so that it can vary daily from one *murābaḥah* sale to another or it can be made fixed for a short period of time such as a week or month as may be determined in the agreement/prospectus. This is made possible because the *murābaḥah* sales are independent one from the other.

The *wakālah* agreement allowing issuer to sell the inventory as an agent of the investor to itself may raise some issues regarding conflict of interest since the obligor is both the buyer and the seller's agent. However, if the terms of such an arrangement are clearly spelled out in the prospectus these issues can be completely mitigated.

3.1.4. Step 4: Distribution of profit to the certificate holders

The fourth step is the distribution of profit which may be done periodically on a monthly, quarterly or yearly basis, as agreed in the prospectus. As the markup is fixed for the maturity duration of each *murābaḥah* sale while it varies from one sale to another the repetition of sales during a profit period will smooth out differences in the profit and bring profit distribution closer to the current market rate. Alternatively, the markup itself may be "fixed" for a single profit distribution period. For example, if profit to certificate holders is to be paid quarterly, then the markup for this quarter may be fixed at LIBOR+2%. At the beginning of each quarter, previous day's LIBOR+2% will be the new "fixed" markup for the quarter. So the variation in the markup appears from quarter to quarter, however, for a single payment term, the markup remains fixed. On the other hand, the markup may also be fixed for the entire duration of the certificates i.e. each sale between the dealer and the certificate holders (on *wakālah* basis) will have the same markup. In this case the only factor which will cause the profit payable to the certificate holders to vary is the number of units of inventories sold during the payment term. Quantities to be sold to the dealership are set in the prospectus but may not be equal for all intervals.

3.1.5. Step 5: Amortization of certificates or capital return to holders

Certificates may be issued with capital refund at the end of the term as a lump sum amount or amortized at periodical intervals. They may be issued for a short terms of 3-9 months or for medium terms of one to five years. The details about the adopted method will be given in the prospectus. The prospectus should determine whether the certificate holders' capital will remain invested in the inventory until the end of its term or will be returned or amortized, periodically, along with profit payments. If the capital is to be returned at maturity of certificates, the principal amount will remain with the issuer/obligor until maturity and the periodical amounts paid to holders will constitute only the mark up from *murābaḥah* sales. The principal will remain with the issuer/obligor and will be used for replenishment of inventory as per agreed terms. This will allow the obligor to have an unvarying fund to finance inventory. This is particularly useful for businesses which have steady sales throughout the year as their cash would not be tied up in purchasing inventory. It can also be used by businesses which are looking to build their own capital for inventory. In case the certificates are amortized over a period of time, the periodic return to holders will comprise of mark up on *murābaḥah* sale and a part of capital. The final payment at maturity will contain *murābaḥah* markup and any unpaid capital remainder. The issuer/obligor can enter into this type of arrangement when the financing of inventory is on a non-continuous basis. Depending on the terms of the agreement, the payment made to the certificate holders may include a portion of the capital along with the markup or only the markup may be paid while the capital remains invested in the inventory until certificates' maturity. When the user/obligor agrees to return the capital periodically along with profit payment, any remaining unpaid capital will be returned to the certificate holders at the end of the certificates' term.

3.2. Calculating Payable Profit

The profit payable, in all cases, will vary depending on the number of units sold since the amount will become payable only when *murābaḥah* sale contracts between the certificate holders and dealership have been concluded.

However, depending on the nature of inventory and the financed business the prospectus may include a commitment by the obligor to purchase either a definite amount or a minimum amount of inventory each period. This would essentially guarantee to the investors a definite or minimum return. Any additional units sold above the minimum amount will provide the investors additional return. This lends the certificates the feature of guaranteeing a minimum return along with variability

of return above that minimum amount. In case, the issuer's sale forecast for a period changes post-issuance, the issuer will still be obliged to buy the specified number of units thereby providing the certificate holders a stable or pre-determined cash inflow and a guaranteed minimum return.

The amount payable to the certificate holders will have two components; the cost of items and the markup. The "cost" will be calculated by multiplying the number of units of an item sold by the purchase price of that item and summing up the costs for all the items to get the "Total Capital Recovered"

Total Capital Recovered=

$$\sum_{x=1}^{n}(Purchase\ price\ of\ item\ x_n * Number\ of\ units\ of\ item\ x_n\ sold)\ldots \quad \text{(i)}$$

The total markup payable will be calculated by using "Financing Days" and "Cost" figures which are calculated as follows:

The financing days for return of capital at all quarters begin at the beginning of the year when the certificates are issued, funds collected and inventory purchased. In case of no replenishment, *murābaḥah*-purchased items during the first quarter are financed for 90 days (until day of payment), items purchased in the second quarter are financed for 181 days, items purchased in the third quarters are financed for 273 days and items purchased in the fourth quarters are financed for 365 days. Of course this is based on the assumption that all *murābaḥah* sales have same maturity which is the same as periodical payment of amortized capital plus profit, i.e., the end of each quarter in this example in order to coincide with payment and periodical redemption of capital plus profit. This inventory *murābaḥah* sale is unlike normal *murābaḥah* sale to the purchase orderer which is intended for negotiated maturity between the two parties. The reason for the difference is apparent because we already set pre-agreed dates for amortization of capital and payment of profit. Accordingly the total markup for the first quarter will be calculated as follows:

Total Markup_{Q1} = *Total Capital Recovered*contractual rate of Profit*90/365* (ii)

However, if the prospectus includes variable markup, equations (i) and (ii) should be segregated such that Total Capital Recovered for all *Murābaḥah* sales concluded under same markup will be summed together and multiplied by the relevant rate of profit.

In case an inventory item falls below the lower limit as determined in an annex to the prospectus, the capital required to replenish these items will be taken from the

Total Capital Recovered and kept aside for payment of replenishment and the remaining amount will be the "Total Capital Payable"

$$Total\ Capital\ Payable = Total\ Capital\ Recovered - \sum_{x=0}^{m}(Price\ \ item\ x_m * No.of\ units\ replensihed) \ldots\ldots \quad \text{(iii)}$$

Replenishment is like re-investment of dividends in the stock market, you start with them a new cycle of investment. This means that the calculation of profit in equation (ii) is not affected by the amount of funds used for replenishment. Accordingly, in case of replenishment, items sold out of replenished items at any quarter are financed from day of replenishment until end of the quarter when capital is paid back to investors:

Thus, the amount of quarterly payment out of replenishment consists of replenishment capital recovered plus its markup. Replenishment capital payable is equal to the cost of replenished items which are sold to the obligor on *Murābaḥah* as follows:

$$Replenishment\ Capital\ payable\ = \sum_{x=1}^{n}(Number\ of\ sold\ units\ of\ item\ x_n replenished * \ Cost\ price\ of\ x_n)\ldots \quad \text{(iv)}$$

The replenishment items markup payable for all items sold to the obligor out of replenishment will be determined by multiplying the "Financing Days" for each replenished item by their respective "Cost". The financing days for each replenished item are the number of days between replenishment and the end of the quarter. Then the sum of the products for all the items will be multiplied by the daily equivalent profit rate which is determined according to the rules adopted in the prospectus.

$$Replenishment\ Markup\ Payable = (\sum_{x=1}^{n}(Financing\ Days * Cost\ of\ item\ x_n)) * Daily\ Rate \quad \ldots..\text{(v)}$$

Of course the total capital distributed to certificate holders for the quarter is the sum of equations (iii) and (vi) while the total profit paid is the sum of equations (ii) and (v). Also:

Total Amount Payable = Total Capital of sold inventory – total capital used for inventory replenishment + Total Markup Payable on all sold inventory items, i.e.(ii)+(v) ….. (vi)

And:

Total Amount Payable = *murābaḥah* Sale Price – cost of net re-investment (vii)
Where:
Net re-investment = cost of replenishment – cost of sold replenished items … (viii)

To ensure that the certificate holders receive a minimum return irrespective of the business of the issuer/obligor, the issuer will undertake to purchase either a definite amount of inventory or a set minimum every quarter, as stated earlier.

3.3. Illustration of the Model

To illustrate the profit calculation mechanism we present in this section an assumptive model depicting the basic features of these certificates. This model is based on the following assumptions: we assume the issuer and beneficiary of the finance who is also the obligor to be a car dealership in Qatar which issues these certificates to finance its inventory. The total amount invested/raised by issuing the certificates is 1,046,000. Payments are made on a quarterly basis. Furthermore:

i. Certificates expire at the end of one year.
ii. Markup for *murābaḥah* sale is fixed at the beginning of each quarter at LIBOR+5%
iii. Capital is repaid along with markup on quarterly basis.
iv. "Cost" is the product of number of inventory items sold on *murābaḥah* basis to the dealer and the purchase price of each item. "Total Capital Recovered" is the sum of "Cost" for all the sold items.
v. The "Total Markup Payable" is the markup due to the certificate holders as a result of the *murābaḥah* sales. This is calculated using equation (ii).
vi. Inventory is replenished at the end of each quarter.
vii. Inventory is replenished to equal opening amount when it falls below 25% of original opening inventory (in the first quarter). This replenishment is carried out by retaining part of capital recovered and using it to purchase new inventory. For example, in the second quarter inventory item 9 falls below the 25% mark. Replenishment of this item to the initial amount of 80 requires a capital of $46,900. This amount is retained from the "Total Capital Recovered" of $281,680 and the remaining amount of $234,780 is returned to investors as payment of capital.

viii. Prices of inventory items remain the same for original purchase as well as for replenishment purchases.

ix. If total capital recovered until the end of the year and actually paid does not equal the amount of capital contributed by the certificate holders, the dealership will make up for the difference in these amounts by buying all the remaining inventory items at the agreed-upon sale price. For example, in the model the total capital repaid until the end of the four quarters is $ 938,000. So the difference of $ 118,000 will be paid by the dealership by purchasing the remaining inventory at the end of certificates' term on *murābaḥah* basis at the already agreed-on rate of profit of LIBOR + 5% on the last day, which is the day of final amortization of the certificates (the prospectus may, alternatively, the prospectus may state that settlement shall be at known LIBOR of the first day of certificates, i.e., the beginning of the year) .The Obligor potential indebtedness to certificates' holders requires, undoubtedly, a guarantee to support the obligor's ability to pay.

x. The final *murābaḥah* sale price of the remaining items of inventory shall be $ 122,530 based on the assumption that settlement of any balance shall be made at the profit rate of the fourth quarter of the certificates, i.e., LIBOR of Oct. 1st plus 5%.

xi. Financing days for each inventory item depends on when the item is bought and then its *murābaḥah*-sale price is paid by the car dealership, i.e., the *murābaḥah* maturity date which is the end of each quarter. For instance an item bought at the beginning of the first quarter and sold in the third quarter will have 273 days as financing days. For replenished items the financing days begin on the day of withholding the amount from Total Recovered Capital and paying it to the supplier. For example, 67 units of item 9 are replenished at the beginning of the 3rd quarter, when these replenished items are sold in the 4th quarter, financing days should be 184.

The calculations based on the above model and assumptions are shown in the following charts on a quarter by quarter basis plus the final settlement *Murābaḥah* sale:

Quarter 1 (Jan-Mar)

LIBOR (3 month)	0.311%
LIBOR +	5.311%
Daily Rate	0.015%
Annual Rate	5.311%
Total Capital Required	$ 1,046,000
Face Value of each certificate	$ 1,000
Total certificates issued	1046
Payment	Quarterly
Lower Limit of inventory (as a percentage of opening	25%
End date	3/31/2013

Item details	Price (QAR)	Opening inventory	Inventory sold	Financing Days	Cost	Closing inventory	Cost*Financing Days	Closing inventory After Replenishment	Capital used for replenishment	Markup
Item 1	500	100	33	90	16500	67	1485000	67	0	219.058125
Item 2	600	120	24	90	14400	96	1296000	96	0	191.178
Item 3	800	150	75	90	60000	75	5400000	75	0	796.575
Item 4	1200	100	23	90	27600	77	2484000	77	0	366.4245
Item 5	400	160	64	90	25600	96	2304000	96	0	339.872
Item 6	1000	180	21.6	90	21600	158.4	1944000	158.4	0	286.767
Item 7	1500	100	40	90	60000	60	5400000	60	0	796.575
Item 8	900	120	30	90	27000	90	2430000	90	0	358.45875
Item 9	700	80	27	90	18900	53	1701000	53	0	250.921125
Item 10	1400	90	31	90	43400	59	3906000	58	0	576.18925
Total		1200	368.6	900	315000	831.4	28350000	830.4	0	4182.01875

Capital used for replenishment	0
Total Capital Recovered	315000
Total Capital Payable	315000
Total Markup Payable	4182.0188
Total Amount Payable	319182

Quarter 2 (Apr-Jun)

LIBOR (3 month)	0.287%
LIBOR+	5.287%
Daily Rate	0.0147%
Annual Rate	5.29%
End date	6/30/2013

Item details	Price (QAR)	Opening inventory	Inventory sold	Financing Days	Cost	Closing inventory	Cost*Financing Days	Closing inventory after replenishment	Capital used for replenishment	Markup
Item 1	500	67	15	181	7500	52	1357500	52	0	199
Item 2	600	96	24	181	14400	72	2606400	72	0	383
Item 3	800	75	32	181	25600	43	4633600	43	0	681
Item 4	1200	77	20	181	24000	57	4344000	57	0	638
Item 5	400	96	50	181	20000	46	3620000	46	0	532
Item 6	1000	158	32	181	32400	126	5864400	126	0	861
Item 7	1500	60	27	181	40500	33	7330500	33	0	1077
Item 8	900	90	60	181	54000	30	9774000	30	0	1435
Item 9	700	53	40	181	28000	13	5068000	80	46900	744
Item 10	1400	58	25	181	35280	33	6385680	33	0	938
Total		830	326	1810	281680	505	50984080	572	46900	7488

Capital used for replenishment	46900
Total Capital Recovered	281680
Total Capital Payable	234780
Total Markup Payable	7487.7203
Total Amount Payable	242268

Quarter 3 (Jul-Sep)

LIBOR (3 month)	0.275250%
LIBOR+	5.275%
Daily Rate	0.014653%
Annual rate	5.287100%
End date	9/30/2013

Item details	Price (QAR)	Opening inventory	Inventory sold	Financing Days	Cost	Closing inventory	Cost*Financing Days	Closing inventory after replenishment	Capital used for replenishment	Markup
Item 1	500	52	25	273	12500	27	3412500	27	0	500.0497396
Item 2	600	72	42	273	25200	30	6879600	30	0	1008.100275
Item 3	800	43	5	273	4000	38	1092000	38	0	160.0159167
Item 4	1200	57	15	273	18000	42	4914000	42	0	720.071625
Item 5	400	46	5	273	2000	41	546000	41	0	80.00795833
Item 6	1000	126	54	273	54000	72	14742000	72	0	2160.214875
Item 7	1500	33	5	273	7500	28	2047500	28	0	300.0298438
Item 8	900	30	6	273	5400	24	1474200	120	86400	216.0214875
Item 9	700	13	13	273	9100	0	2484300	0	0	364.0362104
Item 9*	700	67	43	92	30100	24	2769200	24	0	405.7839528
Item 10	1400	33	4	273	5600	29	1528800	29	0	224.0222833
Total		572	217	2822	173400	355	41890100	451	86400	6138.354167

Capital used for replenishment	86400
Total Capital Recovered	173400
Total Capital Payable	87000
Total Markup Payable	6138.3542
Total Amount Payable	93138

Quarter 4 (Oct-Dec)

LIBOR (3 month)	0.259500%
LIBOR+	5%
Daily Rate	0.014610%
Annual Rate	5.260%
Face Value of each certi	$ 1,000
End date	12/31/2013

Item details	Price (QAR)	Opening inventory	Inventory sold	Financing Days	Cost	Closing inventory	Cost*Financing Days	Closing inventory after replenishment	Capital used for replenishment	Markup
Item 1	500	27	20	365	10000	7	3650000	7	0	533.2548611
Item 2	600	30	25	365	15000	5	5475000	5	0	799.8822917
Item 3	800	38	33	365	26400	5	9636000	5	0	1407.792833
Item 4	1200	42	30	365	36000	12	13140000	12	0	1919.7175
Item 5*	400	41	40	365	16000	1	5840000	1	0	853.2077778
Item 6	1000	72	50	365	50000	22	18250000	22	0	2666.274306
Item 7	1500	28	15	365	22500	13	8212500	13	0	1199.823438
Item 8	900	24	24	365	21600	0	7884000	0	0	1151.8305
Item 8*	900	96	50	92	45000	46	4140000	46	0	604.8425
Item 9*	700	24	18	184	12600	6	2318400	6	0	338.7118
Item 10	1400	29	25	365	35000	4	12775000	4	0	1866.392014
Total		451	330	3561	290100	121	91320900	121	0	13342

Capital used for replenishment	0
Total Capital Recovered	290100
Total Capital Payable	290100
Total Markup Payable	13341.7298
Total Amount Payable	303442

End of Quarter 4 Settlement (Oct-Dec)

LIBOR (3 month)	0.259500%
LIBOR+	5%
Daily Rate	0.014610%
Annual Rate	5.260%
Face Value of each certi	$ 1,000
End date	12/31/2013

Item details	Price (QAR)	Opening inventory	Inventory sold	Financing Days	Cost	Closing inventory	Cost*Financing Days	Closing inventory after replenishment	Capital used for replenishment	Markup
Item 1	500	7	7	365	3500	0	1277500	0	0	186.6392014
Item 2	600	5	5	365	3000	0	1095000	0	0	159.9764583
Item 3	800	5	5	365	4000	0	1460000	0	0	213.3019444
Item 4	1200	12	12	365	14400	0	5256000	0	0	767.887
Item 5*	400	1	1	365	400	0	146000	0	0	21.33019444
Item 6	1000	22	22	365	22000	0	8030000	0	0	1173.160694
Item 7	1500	13	13	365	19500	0	7117500	0	0	1039.846979
Item 8*	900	46	46	92	41400	0	3808800	0	0	556.4551
Item 9*	700	6	6	184	4200	0	772800	0	0	112.9039333
Item 10	1400	4	4	365	5600	0	2044000	0	0	298.6227222
Total		121	121	3196	118000	0	31007600	0	0	4530

Capital used for replenishment	0
Total Capital Recovered	118000
Total Capital Payable	118000
Total Markup Payable	4530.1242
Total Amount Payable	122530

The above five charts are summarized in the following table which shows the quarterly cash flow of the inventory certificates, keeping in mind that final settlement is also assumed to be at the same time as the fourth quarter payment. This table indicates that the average annualized rate of return on the certificates was 5.293% per annum.

Quarterly Cash Flow at Periodically Variable Profit Rate

	Cash flow	capital recovered	profit	profit rate %
Investment: face value of certificates	1,046,000			
Payment: 1st quarter	319,182	315,000	4,182	5.311
Payment: 2nd quarter	242,268	234,780	7,488	5.287
Payment: 3rd quarter	93,138	87,000	6,138	5.275
Payment: 4th quarter	304,562	291,220	13,342	5.260
Settlement payment	122,530	118,000	4,530	5.260
Total	1,081,680	1,046,000	35,680	3.41
Annualized profit rate				5.289

For investors there may be a variation in amount of quarterly payment resulting from the agreed upon schedule of *murābaḥah* sales to the obligor which is in turn based on variation in the business of the company including its production line, there is also variation between quarters resulting from change of profit rate. This variation may be reduced by requiring the company to purchase a minimum amount every quarter. For company, cost price for items taken varies according to the duration inventory remains in warehouse, since higher markup has to be paid for inventory kept for longer periods. This variation and the cost can be reduced by improving the professional inventory management. Alternatively, the prospectus may require equal periodical purchases so that the total capital recovered will be equal for all quarters and if you eliminate the replenishment element fixed capital recovery flow will be secured for all quarters. In such a case the only source of variation in the cash flow will be the variation of the rate of markup.

A Fixed Return and Cash Flow Scenario

A condition may be added whereby the obligor pledges to buy fixed and equal quantities of the inventory every period on weekly, monthly or quarterly basis. In this scenario the amount of cash inflow for the investor will be predictable and pre-determined either for all payments during the whole period of investment if a fixed rate of profit is adopted or for the cost part of the payments if the rate of profit varies from one period to another.

We present in the following a second scenario of the same hypothetical example based on quarterly fixed rate of profit.

The following schedule gives the periodical payment and profit distributed as a result of *murābaḥah* sales effected during each quarter.

Quarterly Cash Flow at Periodically Variable Profit Rate

	Cash flow	capital recovered	profit	profit rate %
Investment: face value of certificates	1,046,000			
Payment: 1st quarter	264.972	261,500	3,472	5.311
Payment: 2nd quarter	268,451	261,500	6,951	5.287
Payment: 3rd quarter	271,961	261,500	10,461	5.275
Payment: 4th quarter	275,068	261,500	13,568	5.26
Total	1,080,452	1,046,000	34,452	3.24
Annualized profit rate				5.283

CALCULATION OF PROFIT DUE TO CERTIFICATE HOLDERS WITH VARIABLE MARKUP WHICH IS FIXED FOR THE PAYMENT TERM

Quarter 1 (Jan-Mar)

LIBOR (3 month)	0.311%
LIBOR +	5.311%
Daily Rate	0.015%
Annual Rate	5.311%
Total Capital Required	$ 1,046,000
Face Value of each certificate	$ 1,000
Total certificates issued	1046
Payment	Quarterly
Quqrterly purchase, No replenishment	25%
End date	3/31/2013

Item details	Price (QAR)	Opening inventory	Inventory sold	Financing Days	Cost	Closing inventory	Cost*Financing Days	Closing inventory After Replenishment	Capital used for replenishment	Markup
Item 1	500	100	25	90	12500	75	1125000	75	0	165.953125
Item 2	600	120	30	90	18000	90	1620000	90	0	238.9725
Item 3	800	150	37.5	90	30000	112.5	2700000	112.5	0	398.2875
Item 4	1200	100	25	90	30000	75	2700000	75	0	398.2875
Item 5	400	160	40	90	16000	120	1440000	120	0	212.42
Item 6	1000	180	45	90	45000	135	4050000	135	0	597.43125
Item 7	1500	100	25	90	37500	75	3375000	75	0	497.859375
Item 8	900	120	30	90	27000	90	2430000	90	0	358.45875
Item 9	700	80	20	90	14000	60	1260000	60	0	185.8675
Item 10	1400	90	22.5	90	31500	67.5	2835000	67.5	0	418.201875

Capital used for replenishment	**0**
Total Capital Recovered	**261500**
Total Capital Payable	**261500**
Total Markup Payab	**3471.7394**
Total Amount Payab	**264972**

Quarter 2 (Apr-Jun)	
LIBOR (3 month)	0.287%
LIBOR+	5.287%
Daily Rate	0.0147%
End date	6/30/2013

Item details	Price (QAR)	Opening inventory	Inventory sold	Financing Days	Cost	Closing inventory	Cost*Financing Days	Closing inventory after replenishment	Capital used for replenishment	Markup
Item 1	500	75	25	181	12500	50	2262500	50	0	332
Item 2	600	90	30	181	18000	60	3258000	60	0	478
Item 3	800	112.5	37.5	181	30000	75	5430000	75	0	797
Item 4	1200	75	25	181	30000	50	5430000	50	0	797
Item 5	400	120	40	181	16000	80	2896000	80	0	425
Item 6	1000	135	45	181	45000	90	8145000	90	0	1196
Item 7	1500	75	25	181	37500	50	6787500	50	0	997
Item 8	900	90	30	181	27000	60	4887000	60	0	718
Item 9	700	60	20	181	14000	40	2534000	40	0	372
Item 10	1400	67.5	22.5	181	31500	45	5701500	45	0	837

Capital used for replenishment	0
Total Capital Recovered	261500
Total Capital Payable	261500
Total Markup Payab	6951.2882
Total Amount Payal	268451

Quarter 3 (Jul-Sep)	
LIBOR (3 month)	0.275250%
LIBOR+	5.275250%
Daily Rate	0.014653%
Annual rate	5.287100%
Face Value of each certificate	$ 1,000
End date	9/30/2013

Item details	Price (QAR)	Opening inventory	Inventory sold	Financing Days	Cost	Closing inventory	Cost*Financing Days	Closing inventory after replenishment	Capital used for replenishment	Markup
Item 1	500	50	25	273	12500	25	3412500	25	0	500.0497396
Item 2	600	60	30	273	18000	30	4914000	30	0	720.071625
Item 3	800	75	37.5	273	30000	37.5	8190000	37.5	0	1200.119375
Item 4	1200	50	25	273	30000	25	8190000	25	0	1200.119375
Item 5	400	80	40	273	16000	40	4368000	0	0	640.0636667
Item 6	1000	90	45	273	45000	45	12285000	45	0	1800.179063
Item 7	1500	50	25	273	37500	25	10237500	25	0	1500.149219
Item 8	900	60	30	273	27000	30	7371000	30	0	1080.107438
Item 9	700	40	20	273	14000	20	3822000	20	0	560.0557083
Item 10	1400	45	22.5	273	31500	22.5	8599500	22.5	0	1260.125344

Capital used for replenishment	0
Total Capital Recovered	261500
Total Capital Payable	261500
Total Markup Payab	10461.0406
Total Amount Payal	271961

Quarter 4 (Oct-Dec)	
LIBOR (3 month)	0.259500%
LIBOR+	5.259500%
Daily Rate	0.014610%
Annual Rate	5.260%
Face Value of each c	$ 1,000
End date	12/31/2013

Item details	Price (QAR)	Opening inventory	Inventory sold	Financing Days	Cost	Closing inventory	Cost*Financing Days	Closing inventory after replenishment	Capital used for replenishment	Markup
Item 1	500	25	25	365	12500	0	4562500	0	0	666.5685764
Item 2	600	30	30	365	18000	0	6570000	0	0	959.85875
Item 3	800	37.5	37.5	365	30000	0	10950000	0	0	1599.764583
Item 4	1200	25	25	365	30000	0	10950000	0	0	1599.764583
Item 5	400	40	40	365	16000	0	5840000	0	0	853.2077778
Item 6	1000	45	45	365	45000	0	16425000	0	0	2399.646875
Item 7	1500	25	25	365	37500	0	13687500	0	0	1999.705729
Item 8	900	30	30	365	27000	0	9855000	0	0	1439.788125
Item 9	700	20	20	181	14000	0	2534000	0	0	370.2103611
Item 10	1400	22.5	22.5	365	31500	0	11497500	0	0	1679.752813

Capital used for replenishment	0
Total Capital Recovered	261500
Total Capital Payable	261500
Total Markup Payab	13568.2682
Total Amount Payab	275068

At maturity of certificates	
Total capital repaid at maturity	1046000.0000

In fact, it is possible to use this inventory certificate as a very impressive Sharīʿah-compliant liquidity tool. Consider a weekly payment along with fixed profit rate for the period of the certificate until maturity and you will get a very short term instrument with known cash flow which is similar to a corporate bond but it is at the same Sharīʿah compliant and tradable at the same time. Alternatively it can also be used for short term placement if the rate of *murābaḥah* sale markup is made variable on weekly or even daily basis.

4. Sharīʿah Considerations

Since the mechanism of these certificates involves different contracts at different stages of execution, it is important, first, to consider these contracts individually to

determine their compliance with Sharīʿah and then to analyze the conformity of the collective effect of these contracts with Sharīʿah.

The first issue arises regarding the representation of an undivided ownership share in the underlying assets by the certificates. This issue has been settled by the OIC Fiqh Academy as well as the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) since both have allowed certificates such as shares and *ṣukūk* to represent ownership in a basket of underlying assets. According to AAOIFI, "A share represents an undivided share in the capital of a corporation, just as it represents an undivided share in its assets and the rights associated with it upon conversion of the capital into tangible things, benefits, debts and so on" (2008). Similarly for *ṣukūk* which are defined by AAOIFI as "certificates of equal value representing undivided shares in the ownership of tangible assets, usufructs and services or (in the ownership of) the assets of particular projects or special investment activity" (2008) From these definitions it is clear that there is no Sharīʿah objection regarding certificates representing an undivided share in ownership of a collection of items of inventory.

The second issue arises from the arrangement of the *wakālah* given to the dealer to sell the inventory, on behalf of the certificate holders, to itself and to replenish the stock on behalf of the holders too while maintaining the ownership of the certificate holders. *Wakālah* is a well-established Sharīʿah permissible contract and is extensively used in Islamic finance. However, whether a *wakīl* may sell to itself is controversial. Those who prevent it use the idea of conflict of interests. Of course when a *wakīl* sells to itself there is a conflict of interest because he would give himself best deal at the expenses of the interest of the principal who would like highest price and soonest date of payment. On the other hand those who allow it argue that the specific authorization of the principal for the *wakīl* to sell to himself covers this matter as the principal is of course aware of the conflict of interests and he overlooks it. But the *wakālah* to sell to himself and to replenish decrease in inventory in the certificate is permissible even according to the most strict view because all the conditions of these sales and purchases are already specified and agreed upon in a transparent way in the prospectus which represent the agreement between investors and user of funds. The way of calculating sale price, the amount of profit, the terms of payment, the quantities and items sold or bought, etc. all are determined in the prospectus. Accordingly this *wakālah* is in the final analysis only procedural to implement the already agreed upon conditions. The *wakālah* contract also specifically includes an authorization to the *wakīl* (obligor/issuer) to hold and safely keep the assets in its warehouse and to take delivery on any and all purchased items on behalf of the certificate holders. Accordingly, this *wakālah* arrangement

contains not a minute trace of conflict of interests and it is therefore Sharīʿah-permissible.

The third issue is the sale of inventory from the certificate holders to dealer on *murābaḥah* basis. In this case, *murābaḥah* is also a well recognized contract in Islamic finance and there is no dispute regarding its permissibility nowadays at least. Regarding the promise of purchase goods from the owner, the OIC *Fiqh* Academy in its fifth meeting concluded that, "A promise made unilaterally by the purchase orderer or the seller, is morally binding on the promisor, unless there is a valid excuse. It is however legally binding if made conditional for the fulfillment of an undertaken obligation, and the promisee has already incurred expenses on the basis of such a promise. The binding nature of the promise means that it should be either fulfilled or a compensation be paid for damages caused due to the unjustifiable non-fulfilling of the promise." (OIC *Fiqh* Academy 86). Therefore a unilateral promise is legally binding on purchaser/obligor; the side that makes the promise.

A fourth issue may arise concerning the combination of two contracts (*murābaḥah* and *wakālah*) in one contract. However, as the terms and details of the contract are spelled out clearly in the master agreement, there will be no conflict of interest. Furthermore such a combination of contract is already being approvedly used in other Islamic financial instruments such as *murābaḥah* line of credit and *mushārakah* line of credit.

A combination of these contracts results in a group of people (certificate holders) jointly owning the inventory. The tradability of the certificates is unquestionable because they represent real physical assets in the possession of the *wakīl* of their owners. At issuance, these certificates represent ownership in assets but the following *murābaḥah* sales result in the certificates representing goods and debt (the amount due from the dealer). The OIC *Fiqh* Academy and AAOIFI are unanimous on the non-tradability of debts. However, regarding the tradability of debts resulting from another transaction such as, in this case, the sale of inventory, the OIC *Fiqh* Academy, in its 21st meeting, has ruled that "if a debt results from the transaction itself, it is considered an addendum to the underlying assets and does not negatively affect the tradability of the certificate" (OIC *Fiqh* Academy 2013) Therefore it is safe to conclude that nothing in the structure or form of these certificates is in conflict with Sharīʿah or may limit their listing and negotiability at a market price in a formal exchange market.

Once the terms and conditions of the certificates' mechanism have been laid out in consultation with the relevant Sharīʿah Board, Sharīʿah supervision will be limited

to approving the Shari'ah compliance of the inventory items. Constant supervision will not be required as the terms of the contract will be sufficient to ensure Shari'ah compliance.

5. Risks Involved

The major type of risk faced by the holders of these inventory certificates is the credit risk of default i.e. the obligor/dealer may fail to repay the capital and markup. Another consideration is the moral hazard that may result from the authority given to the dealership by virtue of *wakālah* agreement and the fact that inventory is handled by the dealer alone. This moral hazard can be mitigated by introducing an appropriate accounting and auditing system which will help in overseeing that the subsequent *murābaḥah* sale contracts of inventory from the certificates holders to the dealership are undertaken in conformity with the master agreement as set in the prospectus. Moral hazard can also be reduced by incorporating appropriate conditions in the contract which limit the authority of the dealer such as a clause specifying minimum units to be purchased in any period. In addition, the investors have the property risk to which the inventory is exposed. It is the risk to which every owner is exposed which is mentioned in the Ḥadīth "*al Kharaj bi al Dhaman* الخراج بالضمان."[1]

Risk of default depends on the credibility and rating of the obligor/dealer and can be mitigated by using appropriate guarantees and collaterals. The risk of ownership can be mitigated by using appropriate Islamic insurance. The insurance may be included as a part of the agreement or the inventory and warehouse can be insured externally while the cost of insurance can be added to the markup. These three kinds of risks are normal in most securities especially the Islamic *ṣukūk* which have always obligors who have certain financial obligations to fulfill (credit risk), properties of *ṣukūk* holders in the hand of other than the owner (moral hazard risk) and ownership of properties other than debts (ownership/property risk). In other words, the certificates of inventory are not different in any substantial way from all other Sharīʿah compliant securities. However, because it all is based on *murābaḥah*, it can accommodate taking guarantees, securities, and liens of any kind for the whole transaction from beginning to end. Therefore, *takāful* insurance of the inventory items along with any other appropriate guarantees, mitigate any risk of loss to the inventory.

[1] The Ḥadith is reported by al Timithi from 'A'ishah, No. 1286, al Timithi said it is good/correct. It is also reported by Ib Habban in his correct collection, No. 4929.

From the point of view of the obligor, the fixed or minimum purchase clause exposes the dealer to risk in the event that its sales for a period go down while it is still obligated to purchase the fixed or minimum inventory from the investors. Another risk faced by the obligor is the markup rate risk which is a part and parcel of any *murābaḥah* contract, i.e., once the rate has been fixed and a sale concluded, it cannot be readjusted for that period irrespective of the rates prevailing in the market. However, this risk can also be minimized by readjusting the rate after every specified period, which can be small intervals, as per the conditions of the prospectus. In fact, since we are dealing with a series of *murābaḥah* contracts there is no Sharīʿah restriction on adopting a different rate of mark up for every new *murābaḥah* purchase. In other words, as in *murābaḥah* the price, and consequently the mark up, is fixed at the time of the contract and cannot be changed until maturity, any new *murābaḥah* contract can be set at a different mark up. This flexibility allows us to set a rule of variable weekly or daily rates. For instance the rule of mark-up may be as follows: "profit is equal to yesterday's LIBOR plus 5% multiplied by the number of days from the date of cost payment until the end of current period."

Accordingly, the rate of certificate's earning at the end of each accounting period, e.g., quarter, month or year, will always average out around the market rate assuming that LIBOR is the latter's representative. Of course variation of the certificate's periodical earning is affected by the intensity of purchases at certain days of the quarter. But this variation will always be limited and does not make the certificates' rate of return to go outside the range between lowest and highest market rate of return in the same quarter or period which is set for periodical profit distribution and amortization payment whether it is a quarter, a month or even a week.

6. Other Uses

The use of these certificates is not only limited to individual investors; they can also be used extensively by Islamic banks. Currently, Islamic banks cannot earn return on funds kept as reserve requirement because it would amount to interest. The idle reserve requirement fund for Islamic banks is an important issue which can be addressed by these certificates. The Islamic banks can finance government inventories and hold sovereign short term certificates as reserves while at the same time they earn a return on them.

Additionally, depending on the rating of the obligor, inventory certificates may be used for short term liquidity management and as a cushion for earning return on short term available liquidity.

7. Comparison with *Ṣukūk* and Other Securities

7.1. Inventory certificates versus *Ijārah Ṣukūk*

One of the most common types of *ṣukūk* found in Islamic financial markets is based on *ijārah* contract. Although several different types of structures of *ijārah ṣukūk* exist in the market, a generic structure is explained here and used for comparison.

The following three parties are involved in *ijārah ṣukūk*:[2]

i. The originator (beneficiary). The originator later assumes the role of lessee/obligor,
ii. The Special Purpose Vehicle (SPV) is the issuer of the *ṣukūk*. The SPV has a separate legal identity and is a bankruptcy remote entity,
iii. The investors.

Structuring the *ṣukūk* involves the following steps:

i. The originator sets up an SPV and sells the *ijārah* assets to the SPV. These assets are leased back by the originator from the SPV,
ii. The SPV then securitizes these assets and issues them as *ṣukūk* to the investors. The proceeds from the investors are paid to the originator as price of the asset,
iii. The originator who becomes now the obligor then makes rental payments to the SPV according to the terms of the *ijārah* contract which are passed on to the investors,
iv. At the termination of lease period or periodically on installments, the originator/obligor repurchases the assets at the face value of the *ṣukūk*.[3]

[2] Of course Islamic and conventional banks may be involved as underwriters.

[3] We mention this structure because it is the most common structure of *ijārah ṣukūk* in the market although it raises an apparent *ʿīnah* controversy. We are not discussing the *ʿīnah* issue in the present paper. However, the structure can be changed if the obligor sells the assets on behalf of a supplier to the *ṣukūk* holders. Then the obligor becomes only a lessee and purchaser from *ṣukūk* holders and the *ʿīnah* does not exist.

This repurchase of the *ijārah* assets at face value has raised Sharīʿah concerns. According to AAOIFI such a repurchase at face value is not permissible.

Standard No. 17 paragraph 5/2/2 "In the case of negotiable *ṣukūk*, it is permissible for the issuer to undertake, through the prospectus of issue, to purchase at market value, after the completion of the process of issue, any certificate that may be offered to him, however, it is not permissible for the issuer to undertake to purchase the *ṣukūk* at their nominal value."

A comparison of the inventory certificates with *ijārah ṣukūk*, shows that:

i. Both types of securities are negotiable.

ii. Return is guaranteed: In *ijārah ṣukūk*, since the return is the rent payment by the originator, it is specified in the contract and is therefore guaranteed. In inventory certificates, the markup for *murābaḥah* sale is also guaranteed and secured in the prospectus.

iii. The pricing mechanisms of both kinds of securities are similar to some extent. In *ijārah ṣukūk*, the *ṣukūk* price is determined on the basis of its relation to the current market rate of return. The price has generally an inverse relation with market return. Of course, this is in addition to the risk element, market liquidity and other variables that affect bonds and *ṣukūk* prices.

    In regard to pricing the inventory certificates when the *murābaḥah* purchase component is structured to follow the market rate of return, the certificate price would be more stable than that of *ṣukūk* because its return is tied to the current market rate. In other words, inventory certificates' market prices may be more sticky to their nominal value than the *ṣukūk* prices, a matter which makes price variations narrow and therefore these certificates are less volatile. This gives them an edge over *ijārah ṣukūk* and makes them a better instrument of liquidity management use than *ijārah ṣukūk;* an attractive point for Islamic banks.

iv. Fixation of return: In *ijārah ṣukūk* the rent can be fixed for the period of the contract. However to avail of the variation privilege we have to take the approach of rent for shorter periods with a renewal clause and a change of the rent only at the contract renewal

    The variation in the certificates takes a different dimension. As we work with consecutive *murābaḥah* purchase contracts each contract can take a new rate of profit. This allows the inventory certificates to follow market rate of return at closer steps much more than *ijārah ṣukūk* can.

v. *Ijārah ṣukūk* are more long term financial securities as they are used to finance long term assets. Alternatively, inventory certificates are more suitable for relatively shorter terms.

vi. Unlike *ijārah ṣukūk*, inventory certificates do not face Sharīʿah issues of *ʿīnah* regarding sale and buy-back because of the normal practices of inventory. Companies and institutions usually obtain them from their suppliers; third parties.

vii. *Ijārah ṣukūk* are more suitable for fixed assets which are leasable while inventory certificates are appropriate for high turnover materials.

7.2 Inventory certificates versus *muḍārabah ṣukūk*

The following three parties are present in a *muḍārabah ṣukūk* structure:

i. The originator who acts as the *muḍārib*,

ii. Special Purpose Vehicle (SPV) acts as a trustee for the investors,

iii. The investors who subscribe to the *ṣukūk* as *rabb al māl* and their funds are passed on to the originator.

The structure involves the following steps:

i. The SPV issues the *ṣukūk* to which the investors subscribe. The funds from the subscription are in trust to the SPV,

ii. The SPV enters into a *muḍārabah* contract with the originator. The SPV acts as a representative of *rabb al māl* and the originator as *muḍārib*,

iii. The funds from investors are passed on to the *muḍārib*,

iv. Profits are distributed between the *rabb al māl* and *muḍārib* according to a predetermined profit sharing ratio as agreed upon in the contract. These profits pass through the SPV as a trustee,

v. The profits from the *muḍārabah* are paid to the investors for each payment period,

vi. At termination, the originator buys the *muḍārabah* interests at market value and the *muḍārabah* entity is dissolved. This payment by the originator is used to return any outstanding amounts to the investors,

vii. *Muḍārabah ṣukūk* are usually loaded by a handful of conditions about expected profit rate, burden of providing evidence, *muḍārib* incentives, etc. which turn the profit/loss unpredictability characteristic of *muḍārabah*

dysfunctional for the objective of assuring investors of an almost guaranteed return and protected capital.

A comparison of *muḍārabah ṣukūk* with inventory certificates shows that:

i. In *muḍārabah ṣukūk*, the return is not guaranteed. In case the *muḍārabah* venture generates a loss, the investors will bear the loss. Although the profit sharing ratio between the *muḍārib* and *rabb al māl* is agreed upon at the initiation of the contract however, the return cannot be fixed for any party.

   In contrast, the return in inventory certificates is determined as per the terms of the prospectus and definitely positive although it is variable as we discussed earlier.

ii. In practice, several *muḍārabah ṣukūk* are structured in such a manner that aims essentially at guaranteeing a fixed return. This type of structure has serious Sharīʿah concerns. Inventory certificates have no such concerns regarding fixing the return since the underlying contract is *murābaḥah.*

7.3 Inventory certificates with corporate promissory notes and commercial papers

A corporation may issue promissory notes as a mode of financing its inventories after it has exhausted other modes of financing such as direct borrowing from banks and bonds issuance. Promissory notes are usually of short and medium terms and have a higher risk attached to them. They are normally offered to investors who can bear such high risks. In comparison with inventory certificates which can also be issued by corporations for short terms, the latter are of low risk since they represent ownership of the physical inventory stored in warehouses in addition to being secured like promissory notes by additional guarantees and securities.

Commercial papers are short term debt certificates which are not secured by any collateral therefore any corporation seeking to issue commercial papers relies on its own credit rating. Alternatively, inventory certificates are secured by owning the underlying inventory and therefore can be issued by any corporation wanting to finance its inventory without heavily relying merely on its credit rating. Both, promissory notes and commercial papers are interest based debt instruments and are therefore non-Sharīʿah-compliant.

8. Conclusion

In conclusion, the inventory certificates have the potential to address several problems prevailing in the Islamic financial markets without raising Sharīʿah

concerns which are observed in other instruments present in the market. Liquidity management of Islamic banks is one the pressing concerns of the Islamic financial industry which can be addressed by issuing these short term inventory certificates. Corporations can use this instrument for managing their financing needs for high turnover inventory items. From the investors' perspectives, these certificates provide an avenue for investment which is of short term, guarantees a minimum return and is low risk.

The structure of the certificate is flexible so as to meet a variety of needs of the parties. The return may be fixed for the entire term of the certificates or it may vary at each payment period as per the prospectus terms. Rights of the investors can be protected by including additional terms in the prospectus such as the minimum inventory clause. Risk of ownership to the investors can be mitigated by using Islamic insurance and adding its contribution to the markup to avoid reducing the net return to investors. The negotiability feature of the certificates makes these certificates more attractive for investors.

Compared with *ijārah* and *muḍārabah ṣukūk*, the certificates' features address some of the issues that raised concerns in the two instruments. The Sharīʿah concern in *ijārah* for sale and buy back of the leased asset is bypassed in the certificates. Furthermore, *ijārah ṣukūk* are long terms instruments whereas the certificates provide short term financing and investing opportunities. *Muḍārabah ṣukūk* cannot have a guaranteed fixed return, and any attempts to structure *muḍārabah ṣukūk* which guarantees a return raises Sharīʿah issues. The certificates do not invoke such objections regarding fixing or guaranteeing the return, rather they have an additional feature that the return can be fixed every payment period to avoid the benchmark rate risk.

Lastly, these certificates can provide stable returns to individual and institutional investors and allow businesses to finance their inventory without having to tie up their own cash in the process and at the same time can be used to address some major issues faced by Islamic banks.

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