Time Value of Money: A Shariah Perspective

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Abstract

**Purpose** – The purpose of this study is to assess the legality of the *Time Value of Money* concept in Islam and its application in contemporary Islamic finance. The study aims to establish the Islamic conceptual foundations of TVM and differentiate it from that of conventional finance. And at the same time touches on some practical applications of TVM in Islamic Finance.

**Methodology** – This study takes on a qualitative research where the literature on Islamic jurisprudence in the area of Islamic financial transactions as well as Islamic economics, both in Arabic and English is reviewed critically to construct the conceptual framework of TVM from an Islamic perspective.

**Findings** – The findings indicate that Islam recognizes the legitimacy of the time value of money in the case of sale transactions and its equivalents, a family of contracts Muslim jurists used to label as “Exchange contracts”. While in benevolent contracts (Uqud Al-tabarru’), the TVM concept is not recognized.
**Introduction:**

Time Value of Money is the idea that money available at the present time is worth more than the same amount in the future due to its potential earning capacity. In general, it is presumed that a unit of money today is valued more than a unit of money in the future. For example, if a person was offered USD 10, and asked whether he would prefer to get that USD 10 now or in five years, it is presumed that he would prefer to get it now. This demonstrates the concept that time has an economic value (Rosly, 2005). This is because all consumption and production activities take time, which is considered a valuable economic resource. Therefore, since current consumption brings more satisfaction than future consumption, people (i.e. creditors) who are asked to postpone current consumption must be compensated for the pleasure foregone today. Hence, in a capitalist economy, this positive time preference – an alternative term for time value of money – lays the rationale for the payment of interest.

**Literature Review**

The time value of money is not a new concept in Islamic jurisprudence; the early jurists of all schools of law discussed it indirectly in many financial transactions such as Murabahah, bilateral ibra’ (da’ wa ta’ajjal), and stipulation of a deferred period in a loan (al-qard hal am mu’ajjal). Their discussions on these issues indicate a general acceptance of the financial and economic effects of the time factor in financial transactions. Although some contemporary Islamic intellectuals such as Mawdudi (Mawdudi, n.d) and Akram Khan (Akram Khan, 2005) have disapproved the concept of TVM because it is the rationale for payment of interest in a capitalist economy, it can be argued that the classical discussion of the abovementioned issues in Islamic jurisprudence (Al-Kasani, 2000; al-Shirazi n.d.; Ibn Muflih n.d.; Ibn September, 2013 The Concept Of The Time Value Of Money: A Shari‘Ah Viewpoint International Journal of Islamic Banking & Finance – Vol. 3, Issue 2 Page 3 Qudamah n.d.) provides a strong argument for Islam’s recognition of TVM and that deferment does have an effect on price.

However, this raises the question as to whether their concept is the same as the conventional theory of Positive Time Preference that justifies Riba in conventional economics?
Classical scholars did not differentiate between the time factor that causes Riba and that which does not lead to Riba, rather, acts as a mechanism for fairness that avoids Riba. In this respect, several contemporary scholars have attempted to distinguish between the acceptance of TVM in Islam and Riba in conventional finance. For example, Sulayman al-Turki and Muhammad ‘Uqlah discussed the main differences between the permissible increment (ziyadah) in a deferred sale and the impermissible increment in a loan contract.

In addition, some scholars have also invoked the concept of TVM in relation to the issue of discounting in project evaluation. This is demonstrated in the use of Net Present Value (NPV) to determine the fair value of an asset by discounting its future value to compensate for its present value.

Kahf has a different argument regarding TVM; he stresses that time preference in real life is an investment phenomenon more than a purely consumption phenomenon (Kahf, 1994) because people will not forgo the present consumption of their money unless the future investment gives higher return. On the contrary, al-Masri argues that TVM, which he calls tafdid zamani, is in fact a man’s natural preference for present consumption of a commodity over his future consumption of it.

Therefore, this study seeks to complement the previous attempts of classical and contemporary scholars in determining where exactly TVM is approved by Shariah, and where it is rejected. Also, it aims to illustrate the implication of approving TVM or disapproving it with respect to the accounting treatment of one of the most popular Islamic financial products.

**TVM from Shariah Point of View**

Now, what about the Sharia perspective on this issue? A review of Islamic jurisprudence reveals that Sharia does not entirely disregard the concept of time value of money; yet it doesn’t fully approve it.

To illustrate this we will divide financial transactions into two types:
• Loan transactions:
Like bank loans, corporate bonds, government bonds, treasury bills, and any interest-bearing securities. Profit made from such transactions is considered unlawful (or Haram) from Sharia perspective because it involves usury (Riba).

• Sale transactions:
Like Murabahah (cost-plus financing), in which the price is increased as a form of compensation to the seller for the deferment of payment. Profit made from such transactions is approved from Sharia viewpoint according to the majority of Muslim scholars.

Exception:

If the sale transaction involves the exchange of one of the 6 usurious (ribawi) categories (gold, silver, wheat, barley, salt, and dates), then the transaction should be effected on the spot, hence the TVM is disregarded here.

But the question is: what lay behind this differentiation? Why is it that time’s monetary valuation is overruled in loan transactions while approved in sale transactions?

The justification of this claim can be divided into two types:

a. Textual evidence:

There are a lot of Quranic verses and Hadiths that some Muslim scholars refer to when trying to justify this issue, but the one I find most relevant is the permissibility of Salam sale. Salam refers to a sale in which a buyer pays the price immediately at the time of initiating the contract for a good that will be delivered in the future.

Narrated Ibn `Abbas:

عن ابن عباس رضي الله عنهما. قال قدم النبي صلى الله عليه وسلم الحديثة، وهم يشلون بالندر السنتين والثلاث. فقال "من أسلف في شيء فقي كلي معلوم ووزن معلوم، إلى أجل معلوم".

The Prophet (ﷺ) came to Medina and the people used to pay in advance the price of dates to be delivered within two or three years. He said (to them), "Whoever pays in advance the price of a
thing to be delivered later should pay it for a specified measure at specified weight for a specified period.” Sahih al-Bukhari 2240, Book 35, Hadith 3.

Of course, the price of the sold item is usually cheaper than its normal price in case it was delivered on the spot. It’s logical to say: if the decrease in price for the deferment of the good is permissible, then the increase in price for the deferment of payment is also permissible.

b. Reasonable evidence:

The difference between the sale contract and the loan contract is that—from Sharia point of view—the former is based on justice and mutual interest (Mushahhah), while the latter is based on benevolence (Ihsan). What that means is: In sale contracts both parties are willing to profit from each other as much as possible, which implies that whenever the buyer is benefiting by deferring the payment, the seller should also benefit by increasing the price; otherwise fairness is not achieved in such transaction.

In contrast, the loan contract is based on Ihsan (benevolence), which means doing good without waiting for anything in exchange. Now, if the lender charged the borrower interest on the loan, the principle of benevolence, which is the Sharia objective behind the loan contract, is violated.

Note: Based on this argument, we mean by “sale transactions” the sale contract and its equivalents, a family of contracts that Muslim Jurists have agreed to label: “Exchange contracts”. As the name suggests, they’re contracts based on exchange, which means that each counterparty is giving something if and only if the other party is giving something else. One clear example of this family of contracts is Ijarah. Although it’s not called “sale” per se, but Jurists have defined it as “the sale of usufruct”.

The following statements illustrate some of the arguments of Muslim jurists in favor of the principle of the time value of money by allowing the increase in the price due to deferment in a Murabahah contract:

al-Kasani (1982, 5: 187) of the Hanafi School in the following argument:

"لَا يُبِدِّلُ الْبِيعُ عَقْدَ مِبادَلَةٍ عَلَى طُرِيقِ الْمِبادَلَةِ وَالْمُساَئِلَةِ فِي الْبَدْلِينَ"
"Because sale is a contract based on equality of counter values"

Al-Dosuqi (1996:266) of the Maliki School argued:

"وجب على بايع المراحبة بيان الأجل الذي اشترى إليه لأن له حصّة من الثمن"

"The seller in Murabaha must disclose the future date to which he bought the commodity, because it earns its portion in price"

Al-Shirbini (2003: 107) of the Shafi school stated:

"لان الأجل يقابله قسط من الثمن"

"Because the deferment earns a portion in price"

IbnTaymiyyah (1998: 275) of the Hanbali School mentioned:

"وإذا باعة إية بالقيمة إلى ذلك الأجل، فإن الأجل يأخذه فقسّط من الثمن"

"The deferment has a portion in price"

Another question to be raised is: if this is the case, if it is all about the contract objectives, then why is it that the TVM is disapproved in sale contracts involving the exchange of usurious items?

The answer is also based on two evidences:

a. Textual evidence:

The well-known Hadith in which prophet Mohammad (PBUH) said:

"عن عبادة بن الصامت، قال قال رسول الله صلى الله عليه وسلم " الذهب والذهب والفضة والفضة والثروة بالثروة والثروة بالثروة، والثروة بالثروة، والثروة بالثروة، والثروة بالثروة، والثروة بالثروة".

Ubada Ibn al-Samit reported Allah's Messenger (ﷺ) as saying:
“Gold is to be paid for by gold, silver by silver, wheat by wheat, barley by barley, dates by dates, and salt by salt, like for like and equal for equal, payment being made hand to hand. If these classes differ, then sell as you wish if payment is made hand to hand”.

b. Reasonable evidence:

These 6 items were considered as money at that time. We know that money in Islam isn’t a store of value, in other words it has no intrinsic value; it’s just a means of transaction and a unit of account. As one prominent Muslim scholar –Imam Ibn al-Qayyim– put it "Money and coins are not meant for themselves but they are meant to be used for acquiring goods (that is, they are a medium of exchange only)”. Based on this rationale, if gold –or any other form of money– is exchanged for gold unequally, this basically means that gold stopped to function as a measure of value (or a means of pricing other goods) and became a good itself, which would lead –inevitably– to instability in the whole economic system, as a result of speculative demand for money.

**Applications of TVM in Islamic Finance**

1– **Salam**

A sale whereby the seller undertakes to supply some specific goods to the buyer at a future date in exchange for an advanced price full paid on the spot.

2– **Istisna’**

A contract to purchase for a definite price something that may be manufactured later on according to agreed specifications between the parties

3– **Murabahah sale**

A type of sale contract, where the seller expressly mentions the cost of the sold commodity, and sells it to another person by adding some profit or mark-up thereon.

In these three contracts, the price of commodity is definitely higher than its spot market price, and there’s only one justification for that, which is the deferment of delivery, a fact that clearly demonstrates the permissibility of TVM concept in sale-like transactions.
4– Project Valuation

Another important application of TVM in Islamic Finance, as well as conventional, is the process of project valuation. There are a lot of techniques used in the industry to assess the economic viability of a project. The most important of which is the Net Present Value (NPV) technique, where the initial cost of the project is deducted from its future projected cash flows, discounted to the present. This discounting process is a very clear application of TVM.

The discounting process is done using what’s called Discount Rate, which in conventional finance is usually calculated by taking three factors into consideration: the inflation rate, the risk premium, and most importantly the risk-free interest rate. Now, using NPV to value a project is, in essence, Shariah compliant. The only issue here is whether using the interest rate in determining the discount rate is in line with Shariah norms or not. This point will be addressed in the next section.

Issues regarding TVM in Islamic Finance:

1– The Pricing of Islamic Financial Products

We saw that discount rate is used to calculate the fair value for a project or for a financial asset. The question is: what does Shariah say about using a discount rate benchmarked to the market interest rate for calculation of fair value purposes? There’s a difference in opinions between jurists about this issue:

Some jurists –such as Abdul Khir– approve it, saying that it is just a benchmark rate, not a real interest rate, because no interest (usury) is charged whatsoever as long as we’re not involved in a loan contract or any other interest-bearing securities.

On the other hand, some other scholars –such as al-Zarka– disapprove it, because it leads to questioning the credibility of the Islamic Finance industry as a whole, for it introduces itself as an interest-free model of financing, and yet using that very interest rate to price its products!
2– Using the Effective Interest Rate method in Islamic Finance

To elaborate on this issue, we will use an example to illustrate the recognition and measurement of one of the major products in Islamic Banking and Finance, i.e. Murabahah home financing. And we will show the difference of measurement between an accounting standard which embraces the concept of Time Value of Money (IFRS), and another standard, which doesn’t fully acknowledge that concept (AAOIFI).

Example (MASB Staff, 2012):

Let us say, In 2001, a bank buys a house at RM500,000 and sells it to the customer at RM696,650. The customer pays in annual installments over a period of 10 years. In 2003, the customer misses an installment but pays the amount in 2004.

Under AAOIFI’s Financial Accounting Standard (FAS) No. 2, Murabaha and Murabaha to the Purchase Orderer, the profit of RM196,650 would either be recognized proportionately over the repayment period or, in a departure from the accruals concept, as and when installments are received.

By comparison, Under IAS 18, Revenue, when there is a difference between the fair value (i.e. RM500,000) and the nominal amount of consideration (i.e. RM696,650) the difference (i.e. RM196,650) is recognized as interest revenue using the effective interest method. The effective interest method amortizes the cost of the financial asset (i.e. RM500,000) and allocates the interest income (i.e. RM196,650) over the relevant period (i.e. 10 years), based on the effective interest rate (which, using a calculator, comes to about 6.5%).

We note that although AAOIFI recognizes the concept of Time Value of Money initially, it doesn’t recognize it in the subsequent measurement. To further illustrate:

At the inception of the contract, there was a true sale taking place, hence AAOIFI recognizes TVM, and thus makes it permissible for the bank to charge the customer a price higher than the market price, as a compensation for the deferment of payment.
Now, once the contract has been initiated, the amount of outstanding principal is considered as debt on the buyer. Hence, applying the effective interest method now would mean relating the pattern of profit to the amount of principal outstanding, i.e. the debt outstanding. And, as we mentioned before, TVM is disapproved in Shariah when it comes to debt.

The following tables illustrate the difference between IFRS and AAOIFI in recognizing and measuring this transaction.

### Recognition and measurement of income for Murabahah home financing

In 2001, a bank buys a house at RM500,000 and sells it to the customer at RM696,650. The customer pays in monthly installments over a period of 10 years. In 2003, the customer misses an installment but pays the amount in 2004. Below are the possible ways that the bank could recognize and measure income over the 10 years.

<table>
<thead>
<tr>
<th>Relevant paragraph(s)</th>
<th>Requirement</th>
<th>Under AAOIFI standards</th>
<th>Under IFRS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAS 2, paragraph 2/4/2 (a)</td>
<td>Proportionate allocation of profits over period of credit (Accrual Basis)</td>
<td>FAS 2, paragraph 2/4/2 (b)</td>
<td>Profits recognized as installments are received (Cash Basis)</td>
</tr>
<tr>
<td>IAS 18, paragraphs 11, 29, 30 IAS 39, paragraphs 9, AG5–AG8</td>
<td>Difference between fair value and nominal amount of consideration recognized as interest revenue, in accordance with IAS 39</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Proportionate Allocation</th>
<th>Profits Recognized</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>19,665</td>
<td>19,665</td>
<td>32,673</td>
</tr>
<tr>
<td>2002</td>
<td>19,665</td>
<td>19,665</td>
<td>30,256</td>
</tr>
<tr>
<td>2003</td>
<td>19,665</td>
<td>0</td>
<td>27,680</td>
</tr>
<tr>
<td>2004</td>
<td>19,665</td>
<td>39,330</td>
<td>24,937</td>
</tr>
<tr>
<td>2005</td>
<td>19,665</td>
<td>19,665</td>
<td>22,014</td>
</tr>
<tr>
<td>2006</td>
<td>19,665</td>
<td>19,665</td>
<td>18,900</td>
</tr>
<tr>
<td>2007</td>
<td>19,665</td>
<td>19,665</td>
<td>15,583</td>
</tr>
<tr>
<td>2008</td>
<td>19,665</td>
<td>19,665</td>
<td>12,049</td>
</tr>
<tr>
<td>2009</td>
<td>19,665</td>
<td>19,665</td>
<td>8,284</td>
</tr>
<tr>
<td>2010</td>
<td>19,665</td>
<td>19,665</td>
<td>4,273</td>
</tr>
</tbody>
</table>
### Amortization Table

<table>
<thead>
<tr>
<th>Year</th>
<th>Op. amortized account</th>
<th>Interest revenue @6.53%</th>
<th>Installments paid</th>
<th>Cl. amortized Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>500,000</td>
<td>32,673</td>
<td>(69,665)</td>
<td>463,008</td>
</tr>
<tr>
<td>2002</td>
<td>463,008</td>
<td>30,256</td>
<td>(69,665)</td>
<td>423,599</td>
</tr>
<tr>
<td>2003</td>
<td>423,599</td>
<td>27,680</td>
<td>(69,665)</td>
<td>381,614</td>
</tr>
<tr>
<td>2004</td>
<td>381,614</td>
<td>24,937</td>
<td>(69,665)</td>
<td>336,886</td>
</tr>
<tr>
<td>2005</td>
<td>336,886</td>
<td>22,014</td>
<td>(69,665)</td>
<td>289,235</td>
</tr>
<tr>
<td>2006</td>
<td>289,235</td>
<td>18,900</td>
<td>(69,665)</td>
<td>238,471</td>
</tr>
<tr>
<td>2007</td>
<td>238,471</td>
<td>15,583</td>
<td>(69,665)</td>
<td>184,389</td>
</tr>
<tr>
<td>2008</td>
<td>184,389</td>
<td>12,049</td>
<td>(69,665)</td>
<td>126,773</td>
</tr>
<tr>
<td>2009</td>
<td>126,773</td>
<td>8,284</td>
<td>(69,665)</td>
<td>65,392</td>
</tr>
<tr>
<td>2010</td>
<td>65,392</td>
<td>4,273</td>
<td>(69,665)</td>
<td>0</td>
</tr>
</tbody>
</table>

So, which is the true and fair representation of such an income stream? AAOIFI advocates would argue that its measurement requirement is true to the trading nature of Murabahah, while the pro-IFRS camp would counter-argue that measurement based on the effective interest rate reflects the true substance of the sale, which is financing.

In my opinion, AAOIFI point of view is more compliant with Shariah rules. As we saw earlier, TVM is disapproved whenever there’s a debt involved. So, relating the revenue recognized each period to the amount of debt outstanding, as the effective interest rate method suggests, goes against Shariah.
Conclusion:

In conclusion, it is obvious that Islam recognizes TVM, but its recognition of TVM is different from that of its conventional counterpart. While in conventional finance, TVM is recognized whenever a deferment is made, whether the transaction is loan or sale or whatever, Islamic finance only recognizes TVM in sale-like transactions, with an exception to be observed in case of selling usurious items, as stated before.

Further research is still needed, however, to address the issue of pricing Islamic finance products, and whether using a benchmark interest rate is Shariah compliant or not? And if not, how could we come up with a benchmark pricing model designed specifically for Islamic finance?
References:


