A Reconstruction of Time of Money Towards The Economic Value of Time for Islamic Finance

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ABSTRACT

It is undeniable that the concept of Time Value of Money (TVM) has been dominated the conventional finance. However, it is also suspected by many that the TVM has also coloured strongly the Islamic finance in practices. It is why a continuous criticism on this issue is unstoppable till present.

Academically, there is also a discourse about the Economic Value of Time (EVT). It is believed that this concept is more acceptable from Islamic point of view.

This paper is a theoretical in nature. It tries to analyse and discuss the possibility of reconstruction of the Islamic Finance by transforming the concept of Time Value of Money into Economic Value of Time. Based on various arguments and perspectives, we believe that the concept of TVM can be reconstructed and transformed into the concept of EVT.

Having more acceptable concept in Finance, it is believed that Islamic Financial Institutions may grow faster and be more acceptable by both Muslim societies particularly and other societies generally. In turn, the Islamic financial institutions can be replacing the conventional financial institutions which are complained not to be not fair enough since they apply the usurious concept which prohibited by Islam and other main religions in this world.

Keywords: Islamic Finance, Time Value of Money, Economic Value of Time, Reconstruction.

1. Introduction

Although the Islamic economics and finance have been recognised widely since about last three or four decades ago, yet the criticism is still colouring them, especially due to the hidden application of the concept of Time Value of Money (TVM) in the Islamic finance. The TVM is – at least – suspected not to be complying with the *Sharia* or Islamic law. As a matter of fact, it is hard to deny that the TVM is widely applied in practices of Islamic financial institutions.

On the other hand, there is also known the concept of Economic Value of Time (EVT). Philosophically, the EVT is not similar to the TVM. Unlike the TVM, the EVT is believed to be more acceptable from the Islamic point of view.

Some questions may arise as why the TVM cannot be accepted in the Islamic finance. What are the reasons why this concept is continuously criticised? What and how is the concept of EVT? To what extent it can be accepted in the practices of Islamic financial institutions?

This paper is trying to discuss and compare the two concepts. In turn, it will analyse to what extent that the EVT can be applied to replace the controversial concept of the TVM.

2. Characteristics of Islamic Finance

Development of Islamic banking and finance industry in Indonesia in the last two or three decades is progressing very rapidly. The same condition occurs globally. Some Islamic financial institutions are widely known in the society like the Islamic banking, Takaful, Islamic Capital Market, Islamic Mutual Funds, Islamic bonds *(Sukuk),* Islamic Pawnshops, Sharia Leasing, and *Baitul Mal wat Tamwil* (BMT). Similarly, in the real sector, there are companies such as Hotels *Sharia, Sharia* Multi-Level Marketing businesses are growing significantly. In the social sectors (Voluntary) there are also emerging some development concepts and practices, such as: professional zakat, zakat productive, prolific and cash *Waqf* endowments, and so on. The question is why these institutions have sprung up? One answer is that the practice of institutions and conventional financial systems contain some aspects that are contrary to Islamic teachings related to finance. Therefore, it is proper if there is an attempt to build a construction system for the Islamic financial institutions. In addition, system and Islamic financial institutions have characteristics that do not exist in the system and conventional financial institutions.

According to Muhammad (2004), the characteristics of (systems and institutions) Islamic finance are indicated by the following requirements:

(b) The application on Islamic principles fully;
(c) Implementation of Islamic economic principles which include:
   i. The prohibition of usury in its various forms;
   ii. Avoiding the concept of "time-value of money";
   iii. To use the money only as a medium of exchange and not as a traded commodity.
(d) The business operates on the basis of the profit or loss sharing
(e) Business activities to earn a reward for services
(f) Do not use the "interest" as a means to earn income

(g) The main principles are: partnership, fairness, transparency and universal
(h) Not to sharply distinguish between the monetary sector and the real sector, although the later is more preferable.

Based on these characteristics, it is clear that the systems, procedures, and mechanisms of financial engineering in Islamic finance are different from conventional one.

The most important and the root of the problem is the practice of usury and the Time Value of Money (TVM). It is known as the heart of the financial mechanism of the conventional. Because of this, the TVM concept should be left away in the system and mechanism of Islamic Finance.

3. Concept of Time Value of Money and The Cost of Capital

The evolution of the concept of usury to interest cannot be separated from financial institutions. The Financial institutions appear, because the capital requirements for trade, finance and industry. The capital mainly comes from the those who have a surplus. The bankers used to stand as an intermediary party. Both suprlus parties as well as the banks will not lend their money for free, particulary in very large amount. The lended money is usually charged with certain amount of cost which is known as an interest.

The notion of interest in conventional economic thinking is closely related with the concept of time value of money. It is assumed that the value of money is increased due to the passage of time, regardless the economic activities. The Time Value of Money is motivated by the idea that the loss of the opportunity when someone lends money to another party. It is why then the lender will charge a certain percentage of the value of capital charge as compensation.

The time value of money concept is indeed originating from a biological intervention in the economy. The concept of time value of money arises because of the assumption that money is equated with the stuff of life (living cells). Living cells, for a given unit of time can be developing and growing. Cell growth in the biological science is formulated with the following formula: Pb = Po (1 + g) t

Where:

Pb: Cell Growth

Po: Cells at initial

g: Growth (growth)

t: Time

This formula was later adopted in the financial sciences, and formulated as follows:

$$\mathbf{FV = PV\,(1 + i)^n}$$

Where:

FV: Future Value (Value of money in the future)

PV: Present Value (present cash value)

i: interest rate

n: Time.

However, money is indeed not something that is alive and growing by itself.

4. Criticism on the Concept of Time Value of Money

In conventional economics, time value of money is defined as: a dollar today is worth more than a dollar in the future because a dollar today can be invested to get a return. There are two reasons that underlie the concept of time value of time, namely: the presence of inflation and the present consumption to future preference consumption (consumption today is preferred over future consumption at the time). The second term is also known as abstinence theory of interest (delay consumption) and time preference theory ('now or today' is more valuable than the future).

The Inflation argument cannot be accepted due to incomplete condition (non-exhausted condition). In every economy there is always a state of inflation and deflation. When circumstances justify the inflation 'time value of money', it should state the reason for the negative deflation 'time value of money'.

On the other hands, the time preference theory in economics also cannot be accepted as it is contrary to the principles of the Shari'a *al-ghunmu bi Lâ ghurmi* (gaining return without being responsible for any risk) and *al-kharaj bi la dhaman* (gaining income without responsible for any expense). Islam always appreciate highly these two principles in daily life, because it is supporting the fairness principles for every member of society, regardless of his / her gender, background, skin, language and faith or belief.

Determination of interest as a determinant of inflation is an act of simplifying the problem. This action only favors one party, who do not want to loose. Every action (either economic or non-economic) contains the possibility of getting profit and loss (return and risk). These consequences should be borne jointly by the parties that involved in the transaction. The conventional loans generally apply the Time Value of Money, due to a lost opportunity cost. It is then compensated with a certain percentage of the principal value of the loan.

The time value of money should be applied wisely and fairly. For example, by ignoring the uncertainty of the return that will be earned. However, it is possible to compensate with discount rate, since it is more general in nature. Therefore, in an Islamic economy, the use of the same discount rate in determining the price *mu'ajjal* is justifiable. This is because: first, buying, selling and leasing is the real sectors that lead to economic value added (economic value added). Second, retention of the right of the seller (cash payment) which has to perform its obligations (deliver goods or services), so she/he cannot carry out its obligations to the other party.

In addition, there are some assumptions and events that can be used as a reference analysis, namely: (1) the price of deferred payment can be greater than the price paid now, (2) not due to inflation nor interest foregone, (3) the right to hold of the goods of the owner. These assumptions refers to what was once done by Zainal Abidin Ali Ibn Zaid Ibn Husayn Ibn Abi Talib.

The money basically does not have a time value. But time has indeed an economic value, provided it is utilized properly, effectively and efficiently. They can then be measured in terms of economic values. In connection with the retention of the right of the owner of the goods in the economic transaction, this is related to the time value. This is illustrated as follows: If an item is sold with a cash profit of $500, then the seller can buy other goods and sell the goods their purchase again. Thus, the seller might double the profit. However, if the goods are sold with a tough pay, then the seller's stuck and cannot buy another. As compensation for the "retention" of the seller from the buyer, then Islam gives (validate) tough price is higher than the cash price.

In conventional economics, uncertainty is converted to a return premium for certainty over uncertainty. In each course there is always a probability of investment to get a positive return, negative return, and no return. Discussion of the time value of money and the cost of capital cannot be removed from the concept of the discount. Discount is very important concept in the theory of capital and investment analysis. In practical terms, it is used in the evaluation of projects or investment decisions. For example, models of the Net Present Value (NPV), Cost Benefit Analysis, Required Internal Rate of Return, and Dividend Model in asset valuation. Discounting is what is meant in the time value of money. The concept of time value of money, or the so-called by the economists as positive preference time mentions that the value of the commodity at the current higher than its value in the future. The concept which was developed by Von Bhom-Bawerk in Capital and Interest and Positive Theory of Capital does mention that the positive time preference a normal economic pattern, systematic, and rational. Discounting the positive time preference is usually based on, or at least related to the interest rate. Since the convergence of opinion in *Fiqh*, that interest is forbidden in Islam because it is considered a form of usury; the questions arose about the use of the discount in the evaluation of the investment, and also use the cost of capital. For example, is the use this fundamentally opposed to the basic principles of the prohibition of usury?

There are differences of opinion in this case, which means that no agreement exists. But there is a similar view among the economist towards the time preference positive theory that is the theory cannot be assumed to be so thoroughly accepted among economists. If it is mentioned that the positive time preference is reasonable and normal patterns by looking at the historical background, it is rational precisely that allows the positive and negative time preference. The possibility of both positive and negative and even zero time preference are due to the uncertainty (uncertainty) in the future.

Disagreements occur when a certain rate used as discounting factor. Experts assume that one is forbidden because Islam does not allow usury. On the other hand, found the sales practices in the form of *bai 'as-salam* and *bai' mu'ajjal* that was not forbidden in Islam. In practice such sales, commodity prices may be different from the spot price at the time of inclusion in the exchange process. Simply put, this is sometimes considered a form of recognition of time value of money or the discount rate. Shabir F. Ulgener allows the interest rate used as discounting factor. According Ulgener is necessary distinction as a surplus interest *(riba)* and interest as a factor in the calculation of economic efficiency. Anas Zarqa itself mentions the discount is based on the opportunity cost efficiency, as economists also agree that ignoring the discount will lead to loss of efficiency, but Islam requires efficiency through prohibition *ishraf* (exaggeration = waste). It's just that in this case Zarqa not want to use the interest rate as the discount factor. Because, if it then makes interest discount (interest) must also be accepted, so it is appropriate that it be rejected. As Zarqa says: Since no real investment in an economy can be undertaken without facing risk, cash flow of such investment should not be discounted by Riskless interst rate, but by true opportunity cost. In connection with the above, it is used as an alternative is the rate of return on risky assets, such as stocks by using the ratio of the size of the earnings per share or the price (E / P). This set of ideas theory Modigliani and Miller (MM) which states that each asset has a different rate. It can be concluded, that the permissibility use certain rate as the discount factor based on the premise that the discount rate and the interest rate are the two things that differ. In addition, the discount factor is necessary for the sake of efficiency definitively. Opinion against the use of rate as the discount factor is given by M. Akram Khan (1992). He rejected the concept of positive time preference. Therefore, the discount can encourage the acceptance of the concept of legitimacy interest (interest) and open the back door for the re-entry of usury. While the argument about efficiency is determined by the determining factor, for example: managerial process, so that the discount factor is not a determinant of the efficiency. Further Akram did not mention the opportunity cost contained by the discount factors as cost of capital. Therefore, the Vogel and Hayes (1998) concluded that to date the concept of time value of capital is not entirely rejected in Islamic law *(Fiqh)*. The discount factor is used as the cost of capital depends on the assets and risks it contains. Islam does not allow borrowing and lending with interest, but Islam permits borrowing on the basis of profit sharing. It can be interpreted, that Islam encourages Muslims to become an investor and not creditors. Investors are always dealing with risk, in line with the concept of profit / loss sharing also means that risk sharing. Thus, the calculation of cost of capital in Islamic finance will lead to the cost of equity, since debt with the system is treated as equity. In connection with this, it is commonly used is the Capital Asset Pricing Model (CAPM) and the Arbitrage Pricing Theory (APT) to determine the rate of return. CAPM assumes that the return of a security is directly proportional to the risk. Risk used is beta, which measures the risk of the relevant securities to market risk. In connection with the equilibrium between return and risk is expressed by the equation of the Security Market Line (SML), as follows: E (Ri) = Rf + Bi [E (Rm)-Rf]

Where:

E (Ri) = Expected return on risky security

E (Rm) = Expected return on market portfolio

Rf = Risk-free rate

Bi = cov (Ri, Rm) / var (Rm)

From this equation it can be seen, that in the CAPM requires two conditions, namely (1) the existence of risk-free rate, and (2) the market portfolio is well diversified. In Islamic Finance, it seems only one that allows fully. For Western financial scientists, a proxy for the risk-free rate is determined by the T-Bill rate. Theoretically, there is no equivalent in the Islamic market, because the government is not allowed to borrow on the basis of this interest. Indeed, it could be possible with a government issued securities are not using predetermined fixed rate, but with the size of GDP growth as a form of profit sharing. Nonetheless, it still cannot be regarded as a proxy of the risk-free rate. Moreover, such government securities have not been widely available in many countries. In the context of Islamic finance, the CAPM seems difficult to use, because of the proxy for the risk-free rate. While APT could be possibly used. APT is also used to determine the risk-adjusted capital rate deemed appropriate. Unlike the CAPM, APT is not used to identify which ones are efficient portfolios, but assumes that each asset return depends on several factors coupled with the influence of the "noise." So it is formulated as follows:

Ri = B1i (factor 1) + B2i (factor 2) + ... + BKI (k factor) + ϵi

The success of this model depends on the ability to locate and determine the list of factors that may be included in the model. Thus, a modification of the Islamic financial market conditions adjustment possible. Therefore, the market is well diversified portfolio can be done. This is evident, that in recent years has shown the development of Islamic capital markets is encouraging. For example, there has been Dow Jones Islamic Index (DJII) for the international market portfolio, Rashid Hussein Bhd. Islamic Index (RHBII) in Malaysia, which can be used as a benchmark for the market portfolio. Indonesia, since 2000 has also held the Jakarta Islamic Index launched at the Jakarta Stock Exchange.

5. Concept Of Economic Value of Time (EVT)

Despite of its remarkbale development, Islamic finance has also triggered a polemic which relates to the problem of usury. The Qur'an has clearly condemned and banned the practice of usury in the economy. The Qur'an forbids interest of money because it is always considered usury. But there is a fundamental question: is it true that usury is related to the time value of money? Or, The TVM concept contains any usurious variable?

In fact, most of what was called by the Qur'an and the Bible about usury seems to involve activities that take advantage of the poor and the needy. Therefore, there are things that must be explained on the theory of time value of money in relation to the problem of usury in Islamic view, and the theory of economic value of time is justified according to Islamic views.

The theory was developed in the 7th century AD. At the time the gold and silver were used as a medium of exchange. This metal is accepted as a medium of exchange due to its intrinsic value, not because the mechanism to be developed during that period, so that the debtor – creditor relationship was not directly arisen as a result of commercial transactions, but it is clearly a transaction which request money. Since the theory of Islamic finance closer to the gold standard is almost certain that the Muslim community more easily doubt whether the current world financial problems caused by no longer wearing the gold standard or the like. Of course, this principle means of exchange as now understood all Islamic countries anywhere, but eventually will gravitate to the forbidden usury. Can be disputed that the rejection of all forms of interest can be justified if it can be debated whether the theory of time value of money is really going. Investing in government bonds is stable, is free from the risk of not getting paid, but not free of shrinkage losses its value is already a reality in the history of the whole world. Anyway, whatever the reason for the same amount of money now is more valuable than money in the future. It also depends on the uncertainty of this life, like the death of lenders that will charge receivables. If the theory of time value of money just a matter of profit and risk, then Islam would reject it due to the uncertainty in the world is also the whole of human nature, and no one has the right to exclude themselves from it by at any cost.

Tawney also stated that the view of the original Christian church forbade usury in Jewish Diaspora provides an opportunity for businesses to take on the role of banks. However, a subsequent development against usury is more rigid and tend to divide the problem in the aspect of the world and the Hereafter, and provide an opportunity for Christians to carry out activities of savings and loan. However, too cynical views on the issue were not right. This proves that the common experience raises controversy about how to conduct business in accordance with the provisions of the true God. Practice may now be more of an adjustment than is the case on the surface. Separation between the spiritual and the secular Western society has not freed from guilt due to business activities. But there was no effect of *Shari'ah* to Arab traders who used to be fair and generous. Community response is equally reasonable. In the West we see the development of the social security legislation of starting Elizabethan Poor Law until now. As mentioned, *Shari'ah* contains many rules to combat poverty through zakat. Foundation or circumstances that used by conventional economics is the economics rejected the *Shariah*, which is the state *alghunmu bi al ghurni* (getting a result regardless of risk) and *al kharaj bi la dhaman* (getting results without spending a fee). Actually, this situation is also rejected by finance theory, namely to explain the relationship between risk and return; goes along with the return is not a risk? In the Islamic view of the time, the time for everyone is the same quantity, i.e. 24 hours a day, 7 days a week. The value of time between one person and another will be different from the quality side. So the factors that determine the value of time is how someone used the time. The more effective (efficient) and efficient (right way), the higher the value of time. Effectively and efficiently will be profitable in the world for anyone who implements them. Therefore, whoever the perpetrators regardless of race, religion, and race, the *sunnatullah*, it will benefit the world. In Islam, not only gains the advantage in the world, but you are looking for is an advantage in the world and the hereafter. Therefore, the use of that time not only has to be effective and efficient, but also should be based on faith. Faith is what will bring benefits in the afterlife. Instead, faith is not able to be profitable in the world that does not mean faith practiced.

If drawn in the economic context, the advantage is obtained after running the business activity. So whoever is doing the business activities effectively and efficiently, he will benefit. However, there are fundamental questions that need to be discussed, namely what size that can be used to define big gains if the base interest rate forecast is forbidden in Islam. In *Shariah* economy, use of the same discount rate in determining the price of *bai 'mu'ajjal* (paid respite) can be used. This is justified, because: 1. Buying and selling and leasing is the real sector that raises the economic value added (economic value added) 2. Retention of the right of the seller (cash payments) that have carry out the obligations (deliver goods or services), so he cannot carry out its obligations to the other party Similarly, the use of a discount rate in determining the profit sharing ratio, can be used. This ratio will be multiplied by the actual earnings (actual return), instead of the expected revenue (expected return). Transaction for different results with buying and selling or leasing transaction, because the transaction is not profit sharing relationship between the seller and the buyer or tenant rent. In exchange for sharing, that there is a relationship between the investors with the capital invested. Thus, neither party has performed its obligations but still retained his rights. *Shahibul Maal* has been carrying out its obligations, namely to provide an amount of capital, the capital invested *(mudharib)* has also been carrying out its obligations, namely the capital invested. Rights for *shahibul Maal* and *mudharib* are sharing the revenue or profit results that, according to the results of the initial agreement whether it will be done on the income or profits. The difference between the interest rate the discount rate can be summarized in Table 1.

Table 1
The differences between the *Interest rate* and the *Discount rate*
from conventional and Islamic point of view.

Certainty Return		Uncertainty Return	
Conventional Economics	Islamic Economics	Conventional Economics	Islamic Economics
Interest rate is due to : 1. *Preference of current consumption* **2.** *Expected inflation*	Profit earned from trading, rental activities are based on: 1. Marginal / profitbility rate of each transaction. 2. The number of transactions within a period.	*Discount rate is influenced by:* 1. *Preference of current consumption* 2. *Expected inflation* 3. *Premium for uncertainty, in other words that the actual return is forced to be equal with the expected return.*	*Discount rate is influenced by expected return*; it is then used to determine the profit / loss sharing. The profit shared is then equal the profit sharing ratio times *actual return* In other words, the actual return should not be equal the *expected return.*

6. A Contract Theory In Islam

The principles of Islamic finance is basically indicated by the contract *(aqad)* agreed and form of financial instruments. These two things will make way for academia and investors who want to consistently use Islamic principles in assessing the investment instruments available in the capital market. Based on the basic principles above, academics and investors do not necessarily reject or modify existing financial instruments. Nevertheless, there are still opportunities to make improvements, and even financial innovation, as well as providing new offers of financial instruments for the welfare and benefit of the wider *(maslahat-mursalah)*. Trade relations and financial ties in Islamic *Fiqh Muamalat* regulated by law. *The Fiqh Muamalat* distinguishes between *wa'ad* with *aqad*. The *wa'ad* is a promise between one and another party. It binds only one party that gave promise is obliged to carry out its obligations. While the parties whom are given an appointment do not assume any obligations to the other party. The *wa'ad* does not determine in detail and specific terms and conditions. Thus, if the party cannot fulfil his or her promise, no sanction or punishment is charged, except perhap a moral one.

The *aqad* is a contract which agreed by two or more parties. This means that each party is bound to perform their respective obligations agreed upon in advance. The *aqad* is used to be wrtitten in detail and it specificies the terms and conditions. Thus, if one or both of the contracting parties is unable to meet its obligations, then one or both of the parties to accept the sanction that has been agreed upon in the *aqad*.

The *Fiqh Muamalat* (Islamic Jurisprudentials) divides the *aqad* into two types, namely: *aqad tabarru*' and *aqad tijarah mu'awada*. The Aqad tabarru ' (Tabarru' comes from the Arabic word birr, means goodness) is all kinds of agreements relating to the transaction or the transaction does not take a profit for. In other words, the *aqad tabarru'* is essentially not a business transaction to seek commercial gain. The purposes *tabarru* contract is to help each other in order to do a good deed. In the *tabarru* contract, the parties are not entitled to do good require anything in return to the other party. Benefits of the contract tabarru 'is from Allah., Not of man. However, those who do good are allowed to ask for his counterpart to simply cover costs (cover the cost) of that amount to be able to do contract *tabarru* 'is. But he should not take the slightest profit from the contract *tabarru* 'it. Activities belonging to *aqad tabarru* 'is: (1) lending money. (2) Lending services, and (3) Provide something. Lending activity can be done in three ways, namely: (1) property lent or *qard* (loan), (2) the property lends collateral given by the borrower or rahn (pledge), and (3) lend possessions to take a loan from others called *hiwalah* (debt swap). Services lent activity can be done in three ways, namely: (1) lending services at this time to do something on behalf of others is called power of attorney, (2) providing maintenance services for money or goods referred *wadi'ah*, and (3) provide services to do something if there is something called *kafalah*. Activities provide something that belongs to someone else can be done by way of grants, *sadaqah, waqf*, etc.. *Tabarru aqad* function 'is to make a profit afterlife, because it is not a business contract. So, this contract cannot be used for commercial purposes. If our goal is to make a profit, using the one-contract agreement with commercial purposes, namely *tijarah* contract. However, it does not mean the contract *tabarru* 'is not at all usable in commercial activities. In fact, the use of contract *tabarru* 'often very vital in a commercial transaction, because the contract *tabarru'* can be used to bridge or facilitate contract-contract *tijarah. Tijarah* contract, (mean = trading activity for profit) is all kinds of agreements relating to the transaction for profit. Contract-contract is done with the goal of profit, because it is commercial. Examples *tijarah* contract is a contract-investment contract, sale, lease, and others. In the run investments, results or benefits can sometimes be ascertained and sometimes cannot be ascertained. Therefore, based on the level of certainty of the results obtained, the contract of *tijarah* can be divided into two major groups, namely: (1) Natural Uncertainty Contracts, and (2) Natural Certainty Contracts. Natural Certainty Contracts or contracts that naturally provide definitive results is a contract made by both parties to exchange their assets, because the object of exchange (both goods and services) must be specified in the initial contract is for sure, both the amount (quantity) , quality (quality), price (price), and the delivery time (time of delivery). Thus, these contracts are *"sunnatullah"* (by their nature) offers a fixed and definite return. This type of contract is a contract-a contract of sale, wage-hire, lease, etc., which is as follows: (1) Buy-Sell Agreement (*Al-Bai '. Salam*, and *Istishna')* and (2) Rent-Hire Agreement (*Ijarah and Ijarah Muntahia Bittamlik*). In-contract agreement above, the parties treat each transaction exchanged assets (both real assets and financial assets). So each party stand-alone (not mixed with each other to form a new business), so there is no risk coverage together. Also there is no us an A mingled with the assets of the asset B. Such that there is the A delivers goods to B, then B instead of handing money to A. Here the goods exchanged for money, so there was contract of sale *(al-bai ')*. Natural Uncertainty Contracts or contract which naturally cannot give definite results is a contract that occurs when transacting parties mutually mixing assets (both real assets and financial assets) into a single unit, and then run the risk together for profit. Here, profits and losses are shared. Therefore, this contract does not provide certainty of income (return), both in terms of quantity (amount) and time (timing) it. Are included in this contract are investment contracts. This investment contract *"sunnatullah"* (by their nature) do not offer a fixed and definite return. So nature is not fixed and predetermined. NUC examples are as follows: (1) *Musharaka*, consisting of *Wujuh, 'inan, Abdan, muwafadhah, mudaraba, (2) muzara'ah; (3) Musaqah; (4) Mukhabarah.*

Economic Value of Time on the Theory of Mixing Natural Uncertainty Contracts / mixing theory is in the business contracts that do not provide certainty of income, both in terms of quantity and time. The rate of return could be positive, negative or zero. These investment contracts are *sunatullah* not offer: (1) Return the fixed and definite. (2) It is not fixed and predetermined. In this type of contract, the parties mutually mixing transact assets (both real assets and financial assets) into a single unit, and then run the risk together for profit. In such contracts, the profits and losses are shared. Assumptions Used There are several assumptions used in formulating the concept of EVT (Economic Value of Time), namely: 1. Property must not be let idle 2. The higher the turn-over the the better the property will be developed, 3. The future is uncertain; so the business can generate profits, loss or break even. 4. Return of business or businesses can be projected for the future 5. Actual results are not always the same as the projected results. Based on the above, and then the mechanism according to Islamic investment, time value of money problem is formulated in the form of interest is unacceptable. The relationship formula can be found in the view of Islamic investment formula as follows: Y = W.v. (QR)

Where:

Y = Income

W = treasure saved

v = Velocity of Money (Level utilization of assets)

Q = ratio for results

R = Return [of Business]

Description:

• Y (income) is income earned by the owners of capital in the production-sharing contracts

• W (treasure saved / developed) is a certain amount of money placed with a bank or expensed *mudharabah* with *mudharabah / musyarakat*.

• v (Velocity of Money / turnover or utilization of capital / assets) is the owner of the activity level of a revolving fund of funds within a period of one year.

Velocity of Money can be calculated with the approach of Cash-to-Cash period, ie by the formula: Number of days in a year (360) divided by the Old Stock (Inventories Day) plus Old Receivables (Day Receivable) and reduced trade payables Lama (Day Payable)

• Q (Profit Sharing Ratio) is the ratio of the percentage that were made and agreed upon by the parties to a contract for the results. Owner funds ratio can be calculated by the formula: expected return divided by the actual profit multiplied by 100% (Expected Return Business / Business Return Actual x 100%), for example: The owner of Capital 40% and 60% of Business Executive.

• R (Return of Business) is the level of profit that occurs in a particular business sector. Therefore, if the theory of time value of money in the economy should not be applied *Shariah*, then the above formula can be used. In economic outcomes, then the economic mechanism is used for revenue sharing and the return of business that occurs in real terms. Here, the meaning of Islam which advocated using the concept of Economic Value of Time. That is, really what led that has economic value, not money has a time value.

Economic Value of Time on the Exchange Theory Natural Certainty Contracts / exchange theory is in the business contract that provides certainty of payment, both in terms of quantity and time. In this form: (1) It's Cash-flow definitely or agreed upon at the beginning of the contract (2) Object exchange was also definitely the quantity, quality, time and price. Determination of the purchase price in Islam, there is no default provisions. However, it can be referenced by *ijtihadi* DSN-MUI fatwa. 04/DSN-MUI/IV/2000, which states: 1. PURCHASE PRICE, In this regard, the Bank must honestly tell the cost of goods to the customer following the required fee (Article 1: 6) 2. PRICE, BANK and then sell the goods to the CUSTOMER (the buyer) with a selling price valued at the purchase price plus benefits (Article 1: 6) Then DSN No.16/IX/2000 fatwa, stating: Price in *Murabahaha* is the purchase price plus the costs and benefits in accordance with the agreement (Article1: 1) It is obvious, that the purchase price applicable *Murabahaha* Islamic banks can be attributed to fatwas. 16/IX/2000. Use of determining the purchase price can be further explained by analysing sharia analysis as follows: the percentage of profit should not be running with the years. However, the cost can run with time. Therefore, to provide a solution to the above formula, the authors propose *Murabahah* selling price formula as follows:

Bank Selling Price = Purchase Price + Cost Recovery + Bank% Gain

Symbols formulation is: $HJB = HBB + (t * CR) + k$

Description:

- HJB = Price Sale
- HBB = Price Buy Bank
- t = time
- CR = Cost Recovery
- k = desired profit margin

Where:

- Purchase price is the price agreed between the seller (the bank) to the buyer (customer).
- The purchase price is the purchase price or market value of the acquired bank when buying certain products, such as cars, motorcycles, etc..
- Time is the time period used for the completion of financing, such as financing 1 year, 2 years and so on.
- Cost Recovery is the value of the costs incurred to complete the financing bank. Cost Recovery can be calculated from the value of Murabahahah Islamic Bank divided Target Sales (Outstanding Financing) multiplied Estimated Operating Costs 1 (one) year
- The profit margin is the percentage of profits desired by the seller (bank) at the time of selling a particular product to the buyer (customer). Formulation is gain = the desired percentage profit multiplied by the value of the financing.

Advances, Discounts and Sales Price Selling price in the *Murabahaha* Islamic banks will be changed to a single borrower with other potential customers. The price changes can be affected by (1) cash in advance *(urbun)* paid by the prospective customer when ordering, and (2) the supplier discount given to Islamic banks. Asserted in the DSN-MUI fatwa No.16/IX/2000, stated: relation to issues in advance of sale, banks are allowed to ask customers to pay a deposit when booking an initial agreement signed (Article. 2: 4). Based on this foundation of the purchase price of the Islamic banks will change the price to be shared by the bank. There is no provision regarding the size of the down payment that must be included by the prospective customer. Based on this can be formulated as follows:

Bank Selling Price = (Price Buy Bank - Customer Advances) Cost Recovery + +% Gain

Or: HJB = (HBB - UM) + (t * CR) + k

Description:

- HJB = Price Sale
- HBB = Price Buy

- UM = Advances *(Urbun)*
- t = time
- CR = Cost Recovery
- k = desired profit margin

If the Islamic bank gets a discount from suppliers, the actual price is the price after the discount. Therefore it is the right customer discount (Ps 1:3, Fatwa No. 16/2000), then the selling price *Murabahaha is:*

HJB = (HBB - D - UM) + (t * CR) + k

Where:

- HJB = Price Sale
- HBB = Price Buy
- D = discount suppliers that provide
- UM = Advances *(Urbun)*
- t = time
- CR = Cost Recovery
- k = desired profit margin

If delivery occurs after a contract discount, the discount is based on the distribution agreement contained in the contract. Then the selling price of *Murabahaha* will be :

HJB = [(HBB - UM) + (t * CR) + k] - D

Where:

- HJB = Selling Price
- HBB = Purchasing price
- UM = Advances *(Urbun)*
- t = time
- CR = Cost Recovery
- k = desired profit margin
- D = discount given by suppliers

7. Conclusion

Based on the above discussions, we can conclude that the concept of Time Value of Money is motivated by the notion that the loss of the opportunity cost of capital owners when she/he lends money to another party. In this regard, the capital owner charges a certain percentage of the value of capital as the compensation to the borrower. Assumption that the money lent will experience loss of opportunity cost can be refuted, because the money is not borrowed and then invested. No guarantee that an investment will always result a return. Even if the profit is earned, the return on investment is not always the same in every period. Any investment will experience possible outcomes of profit, loss and breakeven.

In Islamic point view, every one enjoy the same period of the time that is 24 hours a day, 7 days a week, and so forth. The value of time between one and other will be different from the quality perspective. So the main factor that determines the value of time is how someone spends the time. The more effective and efficient someone utilize the time, the higher the value of time. Therefore, whoever the business actor, regardless of race, religion, language and race, by the *sunnatullah* (the law of Allah), would earn the benefit materially and worldly.

Therefore, from the Islamic point of view, the use of the time not only has to be effective and efficient, but also should be based on faith. The Faith is what will bring benefits in the afterlife. However, if someone's faith does not provide her / him the worldly benefit, it means that the faith has not yet fully implemented entirely. In the economic context, the advantage is obtained after running the business activity. Whoever is doing the business activities effectively and efficiently will earn the benefit.

However, there is a fundamental question that need to be discussed further, namely how to set the measurement of projected gain, if the interest rate is forbidden in Islam. In this respect, Islam has offered two important things in relation to contracts in Islamic finance with reference to time. They are: (1) the time the velocity of money from time to time (velocity of money) and (2) the costs are used to complete the project (cost recovery) from time to time. Based on these two things, then the formula for the development of the economic value of time should make the components and benefits of the type of contract used: (1) whether the contract is deemed to be natural certainty or (2) it is the natural uncertainty contract. Each type of contracts requires a different formula to be applied.

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