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Determination of the Interest Rate of Facilities in Islamic Banking (Case Study Agricultural Bank)

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Abstract

A group of activists and people claim that banks do not offer the bank interest rate approved by the Monetary and Credit Council in association with banking facilities. This has increased the complexity of the mechanism of providing facilities in the banks and has led to complaints. Such ambiguities are mainly rooted in how the interest rate of facilities is calculated in the Iran's Islamic banking. Accordingly, the present study aimed to examine the determination of the interest rate of facilities in the country's Islamic banking. The present study was conducted using a descriptive method. Research findings showed that there were two different ways of determining the interest rate of banking facilities in Iran. One is the simple method and the other is the compound method. When the compound approach is taken, the return difference depends on length of the contract, i.e. the maturity of installments. This means that unlike the simple method, in the compound method, when the contract period is longer, the return difference will be in favor of bank.

Keywords: Interest Rate, Facilities, Islamic Banking.

Introduction

Interest rate on the bank facilities and deposits is undoubtedly the most significant indicator of the money market. Theoretical and empirical studies show that the changes in the interest rates and banking facilities influence the composition of many types of deposits, investments and inflation rate. Thus, any type of change in the interest rate, whether an increase or a decrease, must be carefully studied. Also, the position of each macro variable and their sensitivity has to be detected in relation with the changes of interest rate on banking facilities. For many years, the Central bank has determined the maximum interest rate on long-term deposits by issuing directives to banks and credit institutions. The interest rate on the facilities is determined based on the interest rate on deposits. Furthermore, there is usually a three-percent difference between one-year deposits and facilities with partnership and no partnership contracts. However, the formula for determining the interest rate in the facilities and calculating the installments and bank arrears has always been quite ambiguous (Seyed Noorani et al., 2019).

According to many banking and accounting experts, there is only one simple mathematical formula for calculating the interest rate in the entire world. However, the addition of restrictions has changed the calculation of interest rates and installment repayments in the banks. Therefore, it is necessary to assess the interest rate on banking facilities, how they are calculated

and the effective factors, which have all been the focus of this study. Accordingly, in the next section of this article, different types of banking facilities are introduced and defined. Then, the factors affecting the interest rate of banking facilities are examined. Next, the method of calculation of the interest rate on banking facilities is explained in the following section. Finally, after analyzing the methods of determination of interest rate on banking facilities, the paper comes to a conclusion.

Research Literature

Definition and types of banking facilities:

Banking facilities are the main outputs of banks through which the stray liquidities of the societies are injected into the purposeful and defined economic bases. This means that a bank equips resources (including capital, equity and different types of deposits and/or other debts) and consumes them for predetermined purposes. In other words, the assumption is that banks make profits at the end of each financial period by creating these income-generating assets and utilize their accumulated profits to expand their activities through their resources, including raising capital or other debts. Nonetheless, in development banks that are usually formed with the governments' capitals, achieving more important than the profitability of the bank (Haeri Nasab et al., 2018).

Literally, the word facility stems from facilitation (meaning simplification). The questions that may rise are as follows: what is the application or use of these facilities and how do they support the economic sectors?

Liquidity and its necessity are usually of considerable importance in the economic life.

- Example 1: when you purchase a product in installments from the market, the seller has in fact facilitated your purchase or has offered you a facility.
- Example 2: when you take money from someone, work with the money with the intention of sharing the profit, it means that you have received a facility, because you did not have the money on your own.
- Example 3: you might pre-purchase the crop of a garden or a farm at a cheaper price before it is harvested and agree upon your ownership of the crop. You have money, which is needed by the farmer to survive and continue working. This activity applies to other production units as well.
- Example 4: there is a term called "debt collector", meaning someone comes and does the difficult thing that you cannot do yourself for you at a price. In other words, the debt collector buys this difficulty from you. For instance, someone has written you a check that they cannot cash and you cannot do anything about it. There are some people whose job is to make sure that the check is cashed. Thus, you give them the check and they will charge you a fee for cashing it, or they buy the check at a lower price (they buy the check with a discount; you get your money and leave). In such situations, the debt collector does not cash the check through legal actions, but they take illegal measures, such as using force or bullying, which do not leave a good However, these actions can be considered legal if they are done in the

right form, like buying someone's debt, discounting documents or contract of reward.

- Example 5: if you rent a property for a period of time and delegate its usufruct to the tenant during this period, you have given them a kind of facility. Or if you rent the same property at a price that will be returned to you as rent in a certain period of time, you can give the property to your tenant. This also means that you have provided them with a facility.

One goal of such actions is supporting the non-oil export sector, which is entrusted to the bank. It should be noted that in some cases, other terms are used instead of banking facilities that are somewhat the same. Some of these words are: credit, financing and loan. However, loan is usually only used for interest-free loan in Islamic banking (Hesami Azizi et al., 2016).
Some of the most important facilities offered by Iranian banks are as follows:

1) Interest-free loans: Interest-free or flat loans are a contract under which the bank (as the lender) lends a certain amount to natural or legal individuals (as the borrower) in accordance with the rules set forth in the instructions.
2) Civil partnership

Civil partnership is the incorporation of cash or non-cash shares of various legal or natural individuals, in a joint manner for profit and in accordance with the contract.

3) Limited partnership

Limited partnership is a contract under which one of the parties (the owner) is responsible for providing the capital (cash), provided that the other party (the agent) uses the capital to trade and both parties share the profits. Limited partnership has the same conditions as civil partnership in business affairs. The only difference between the two is that in limited partnership, one hundred percent of the capital required for carrying out the operation is supplied by the organization. While in civil partnership, only a certain percentage of the capital is supplied by the organization. Eligible costs are not limited to the main T costs and any other costs have to be specified in the contract by agreement of the two parties. In limited partnership, the share of the organization is paid at once and in cash. However, the payment can be done in installments.

4) Contract of reward

Contract of reward is a personal obligation to pay a certain reward for a certain act, whether it is specific or not. In this contract, the obligated person is called the offer or and the other party is called the offered. For instance, someone says that they would reward whoever finds an animal or a car a certain amount of money. This one-sided contract is called a contract of reward. There are two types of reward contracts depending on how it is created and what is offered. The first type is the particular contract of reward, where there is a specific reward that is supposed to be given to a certain person or a few individuals. For example, a father tells his child that he would give them a certain amount of money if they solved this math problem. The second type of reward contract is the general contract of reward. In this type of contract, the offer or only wishes to get what they want and it does not matter to him who performs the act. For example, the offer or states that I reward whoever does this certain act.

5) Dealing in futures

Dealing in futures or futures trading is pre-purchasing the products of the production units at a certain price in cash. Accordingly,

pre-purchasing the products of the production units and paying it in cash is used as a way to supply a part of their working capital (whether owned by a legal or a natural person) (Moosavian, 2005).
However, using any of the facilities mentioned above (with the exception of interest-free loans) requires paying an interest rate commensurate with the type of the facility. Therefore, the factors determining the interest rate of banking facilities have to be examined before explaining the method of calculation of the interest rate.

Factors determining the interest rate on banking facilities:

The pricing of banking facilities is influenced by many factors. The key factors in this regard are as follows: the monetary amount of the facilities, the repayment period, advance payment and insurance. The average cost and the price of a consumed facility have a direct relationship with the monetary amount of the facility. In fact, it may be necessary to set very high interest rates on banking facilities to make even the small loans and facilities profitable for the bank. The smaller the monetary amount of the facility is, the higher the contractual interest rate has to be set to guarantee a considerable net return. Therefore, the contractual interest rate required for guaranteeing a certain net return reduces as the monetary amount of the facility increases (Haeri Nasab et al., 2018).
Banks may be able to gain profit from their small facilities by setting very high interest rates on smaller facilities. However, some banks offer facilities with the lowest interest rate to avoid creating a negative image in the minds of their customers. This is possible in cases where the recipients of the facilities repeat their facilities, whose initial costs and receipts are low. In general, in developing financial markets, banks either set very high interest rates for their small facilities or avoid offering such facilities altogether (Sharifi, 2013).
Interest rates on small facilities decrease not only as the volume of the facilities increases, but also as the repayment period is lengthened. This is because of the fact that when the length of the repayment period is extended, the initial costs of paying the facilities are recovered through the higher income resulting from the longer repayment period. Therefore, banks charge lower interest rates for facilities with longer repayment periods in comparison with short-term facilities. Nevertheless, banks tend to set a higher contractual interest rate on long-term facilities. There are at least five reasons for banks' tendency to set higher interest rates on long-term facilities:

- The risk of potential losses is higher for borrowers who request long-term facilities.
- People who apply for long-term facilities are less sensitive to interest rates since they pay the minimum amount in their installments.
- Early payment of the installments of long-term facilities increases the interest rates, because it would be pointless to consider contractual deadlines to estimate the potential net return on such facilities.
- It is essential to cover the liquidity risk for long-term facilities by setting a high interest rate on such facilities.
- There is a greater need to set higher interest rates on facilities with a high inflation rate to cover the potential risks of facilities.

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Although facilities with longer maturities are riskier for banks, but banks also offer this type of facility to attract new customers and increase their profitability. For instance, long-term facilities give the borrower the opportunity to adjust their payments with their own budget restrictions, which then leads to an increase in the demand for such facilities. As a result of this increase, banks set and demand a higher interest rate on their long-term facilities. Even if interest rates are not changed, facilities with a longer repayment period will have a higher rate on their net return in comparison with short-term facilities (Kheyrkhah et al., 2016).
Determination of the interest rate on facilities may also be impacted by factors other than interest rate and therefore can reduce or change the default risk. These factors include advance payments, required deposit and late payment penalties. The higher the deposit and the more the advance payment are, the more the risk associated with the facility is reduced. However, the demand for the facility and also the demanded monetary amounts are also reduced as these risk factors are reduced. The costs of debt collection and potential losses can be potentially reduced by encouraging the borrowers to repay their facilities on time by enforcing late payment penalties (Al Buyeh & Alam al Hoda, 2012). The method of calculating the interest rate on banking facilities in Islamic banking will be examined in the next section.

Method of calculating interest rate on banking facilities:

One of the most important issues regarding the calculation of bank interest is the method used for calculating the interest rate on facilities in receipts and payments. There are various methods for such computations, each of which have advantages and disadvantages. Simple interest rate and compound interest rate are two of the methods used for calculating the interest rate on banking facilities. If the receipts are calculated using the simple method, the total interest on facilities that are longer than two years will be less than the interest rate calculated using the compound method. However, this method may ultimately cause problems for the financial institution offering the facility. The opposite is true for the cases where the compound approach is used. In such cases, the received interest will be higher in comparison with the previous method. This approach has some advantages for the banks as well as some disadvantages for the applicants.

- The Simple Method

The calculation of the rate of return on banking facilities using the simple approach is as follows. According to Article 20 of the Law on Interest-Free Banking, a number of tools have been mentioned which can play important roles in affecting monetary policies. Some of these tools are determining the minimum or maximum of the potential share to return ration in partnership facilities, determining the minimum and maximum share of the banks' interest in installment sale and rental contract facilities in proportion with the final cost of the transaction.

$$Return\ (R) = \frac{Net\ amount\ of\ facility\ (P) \times (Number\ of\ months\ (N) + 1) \times Rate\ of\ return\ (r)}{2400}$$

$$Amount\ of\ installment\ (A) = \frac{Net\ amount\ of\ loan\ (P) + Return\ (R)}{Number\ of\ months\ of\ the\ contract\ (N)}$$

The approach taken to calculate the return on the facility is one of the issues that may rise after the adaptation of the Law on Interest-Free Banking Operations. The interest used to be computed using the compound method in the Iranian banking system, but legal authorities approved the simple method after the Islamic revolution in 1979, which has been used since then. However, the compound method replaced the simple method again in 2007 based on the circular issued by the Central Bank. This method has been applied before the establishment of private banks and from 1979 onwards. But this method usually causes some problems. The first issue is that an atmosphere would be created for speculation and rent-seeking would be implicitly encouraged. The second issue is that the banks' profitability level would be lower than when the compound method is used.

- Compound method

The compound method of calculating bank interest has been formulated based on the balance of receipts and payments. This approach is applied in accordance with a specific equation. In this equation, P, r, N, A and R stand for the net amount of facilities, rate of annual return (%), number of repayment months, amount of monthly installments and total return, respectively. Therefore, the amount of monthly installment (A) and total return (R) are calculated as follows:

$$A = \frac{\frac{pr}{12\left(1+\frac{r}{12}\right)^{N}}}{(1+\frac{r}{12})^{N}-1}$$

$$R = NA - P$$

By reviewing the previous sections, it can be concluded that firstly, there is a difference be4ween the private and state banks in regards with the interest rate calculation method. In general, it can be argued that bank interest is not computed in the same way in the banks under study. Secondly, none of the banks just use the method introduced by the Central Bank alone. Therefore, it is not clear what the conditions for early loan settlement are for the customers (Khaki, 2017).

Methodology

In general, scientific studies can be divided into two categories based on their data obtaining method (research design): descriptive research and experimental research. Descriptive research describes the situation of a phenomenon at a certain time. This method does not suggest any hypotheses, does not study the relationships between the variables and does not recommend any further actions. A descriptive research only describes the existing situation. This is the same as the process carried out in the present study. Thus, the present study was a descriptive research. It aimed to examine the methods for determining the interest rate on facilities in Iran's Islamic banking system.

Results

Directed interest/profit rates: Profit rates on bank deposits are set by the central bank and approved by the Money and Credit Council. They range from 7% for short-term savings deposits to 13-17% for term deposits of two to four years. In addition, there are Qard alHassaneh deposits at a profit rate of 0%. At an inflation rate of 15.6% as given by the central bank for that period, the rates on short-term deposits are negative in real

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terms at –8.6% to -6.6%; for Qard ol-hasaneh deposits they are –15.6%. For long-term deposits, they are slightly negative or positive depending upon the term (Table 1).

Lending rates on Islamic contract facilities are differentiated by sector and profitability, Keeping interest or profit rates on credit artificially low creates a huge demand which cannot be satisfied at the given rate structure. As a result, formal sector credit is rationed and demand is shifted to the informal market. On that market, risks are higher, resulting in higher interest rates; rates of 30-36% are reported on commercial informal markets ranging from a low of 13.5% for agriculture to 21% and higher for commerce, services and construction. In real terms, they ranged from –2.1% to above +5% (Table 2).

Table 1. Profit rates on bank deposits in percent p.a.,

Bank deposit category	Nominal	Real
Short-term savings deposits	7	-8.6
Special short-term deposits	9	-6.6
Long-term deposits	13-17	-2.6 – +1.4

Table 2. Rates of return on Islamic banking facilities in percent p.a.,

Sector	Nominal	Real
Agriculture	13.5	-2.1
Manufacturing & mining	16	+0.4
Housing (with depositing)	15	-0.4
Housing (without depositing)	18	+1.4
Exports	15	-0.6
Commerce, services, construction, misc.	21 (minimum)	+5.4 (minimum)

Discussion

Research findings showed that the return rate on the facilities offered in Islamic banking could be calculated using by one of the simple or the compound methods. It is possible to assess the extent to which the compound approach changes the return rate in comparison with the simple method. For instance, based on the simple method, when someone receives 60 million Rials as a loan with a 12% interest, they have to pay a monthly amount of 5325 thousand Rials. The same person has to pay 5330 thousand Rials, if the simple approach is taken, which would profit the bank even more. Meanwhile, if the person receives the same amount with a 20-year maturity, the return rate they have to pay to the bank is 16.36% based on the simple method, which is 4.26 more profitable for the bank.

When the compound approach is taken, the longer the contract period is (in relation to the maturity of the installments) the greater the return difference will be (in favor of the bank) in comparison with the simple

method. As a result, given the announcement of the new method of calculating the interest in the banks, the banks need to take certain measures. For example, it is necessary for the banks to charge an equal fee for the additional costs and for the actual amount of the facilities. By doing so, customers would be more motivated to amortize the early-repaid facilities (before maturity) and to return the bank resources faster and to revive their financial resources. This is done in a similar way in the entire banking system.

In this case, the customers who have the ability to settle the facilities before the end of the deadline will be encouraged to repay them earlier. As a result, a part of bank's resources will be released for other applicants, which will in turn increase the number of customers satisfied with the banking system.

Therefore, the method used for the calculation of the return rates will make a difference. The simple return rate method is based upon the assumption that the interests earned in various stages do not enter the investment, the return on the earned profits is not calculate and only the official return on the facilities is taken into consideration.

When the simple approach is taken, the rate of earned interest was increased over time with a constant trend. The slope of this trend depends on the interest rate. Whereas, when the compound method is used, the earned interest has an upward and increasing trend. Thus, it is observed that the interest rate announced by the Monetary and Credit Council alone cannot be considered as the criterion and the methods of interest calculation in the banks and credit institutions should be the same.

Conclusion

Determination of interest rate on the facilities offered by the bank has been one of the challenging issues in Iran's Banking and Monetary Sector over the past few years. According to the law of supply and demand, under normal circumstances no one has the right to price and pricing is done in the market. In the Credit and Banking Facilities Market, the interest rate must be determined by the supply and demand factors and no one has the right to determine interest rates. But in Iran, the pricing is done by monetary and banking policymakers, in general and the Central bank, in particular. Research findings showed that there are two different methods for calculating the rate of interest on facilities, the simple and the compound method. Therefore, an approach has to be taken, based on which all banks use a unit network for calculating the rate of interest on facilities. For instance, all banks currently use a unit network for electronic payments and that is why banks have not faced any challenges in this regard. On the one hand, the rate of late payment fees in this network can be determined in such a way that is not abused by the banks. On the other one, it is a preventive factor as far as prevention of late payment of installment is concerned. As a result, a method should be adopted that offers a clear mechanism for calculating the banks' repayments for the customers and the regulatory policies of this approach should not only emphasize on rates and setting a maximum rate. If this is not realized, the issue of information asymmetry in banking contracts would cause fluctuations in rates on the banking facilities.

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