The Model to Calculate the Cost of Money to the Breakdown of Deposits and Banking Service

Javad Elkaie Behjati, Mehrzad Minouei

Abstract—The present study aimed to assess the cost of money based on separating deposits and identifying actions and costs affecting in the process of cost of money in EN Bank of Iran (also known as Eghtesad Novin Bank). The method to calculate the cost of money is based on Activity-Based Costing (ABC). To conduct the study, the required data including deposits in banks and absorbed costs related to the same deposits were extracted from the financial statements of the bank. In order to cost the bank services properly as well as determining the commercial strategies required by commercial units, the data are precisely studied and the cost of each deposit is calculated according to the ABC. Eventually, the factors helping to improve the cost management and also a new model to calculate the cost of money in the bank are presented by some applicable formulas. Furthermore, some offers have been provided for users of both sections, in the practical section in commercial units and the theoretical one in universities.

Keywords—The cost of money, activity-based costing, banking, bank deposits, bank fees, services bank.

I. INTRODUCTION

THE objective of any economic unit is always to meet the needs of shareholders and investors as well as producing profit and income. Banks and financial institutions are not exception and it is more important for them to calculate and recognize the cost of money. By calculating the cost of money and its analysis, one can estimate the amount and cost of payment as well as interest and run. Therefore, what is expressed is an overview of the extremely complicated calculation of cost of money in financial institutions.

A. Problem Statement

The events (such as; global competition, information development and cheaper access to the information systems) in the past 2 decades have influenced the banks and their customers. The attempts to get ranked in global economy and enter to international markets have made it essential to have the attitudes like customer satisfaction and the activity-based management. Success and continuity in the new competitive environment require the use of modern methods which enable a business on a global level. The banking industry is not excluded from this category. One of the most competitive tools in this context is the factors determining the price and the cost of services and products. Determining the true cost is important. The finished cost affects pricing decisions, determining gains and losses, controlling and reducing the costs and taking the decision to provide or removing a product or service. Therefore, understanding and applying the appropriate basis to estimate the cost of banking services seem essential. Also, information on the cost of the products, services and customers is the most important financial information that is needed for management decisions. Trading units have turned to costing via ABC, as a result of information management requirements not being met by traditional systems.

ABC system is a new system of costing of products and services which makes estimation of needs such as; correct calculation of product cost, improving production processes, eliminating redundant activities, identifying cost drivers and determining the business strategy. The system determines the cause of cost and production rather than addressing the symptoms and disabilities; therefore, if an activity does not have a philosophy of justification, the applicant may delete, modify or improve it.

The money cost in a bank includes cost of deposits and banking services. So, to calculate the cost of money in the bank, it is necessary to separate deposits and banking services expenses incurred by banks to calculate and determine the real price of money. In this study, considering deposit separation and banking services expenses, the cost of money is examined in EN Bank by applying ABC model.

B. The Importance of Research

Factors affecting the final price of money in the bank are divided into direct and indirect forms, where bank interest is a direct one and administrative costs, salaries and depreciation of property are kinds of indirect. A major factor in increasing the final price of money in Iran due to direct costs is to reduce the cost of money in the banking system which is subjected to the management and reduction of direct costs. In this case, banks may not be able to afford the costs and then the price of facilities will face the increasing rates. It is certain that inflation could be a factor functioning in the increase of the final price of money, but this approach does not seem appropriate to reduce inflation, reducing the final price of money by reducing the deposit interest. It will make the bank and the customer suffer. If it is possible to keep the inflation rate and cost of money in harmony with each other than the financial institutes will not be under pressure. It is also to be mentioned that in the private banks the final price of the money is higher than the state banks.

The final price of the money for financial institutions is of great importance. The services provided to the costumers in

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these institutions are according to the financial sources they receive. Most banking and financial services are on the basis of money and liquidity. This helps to calculate the exact cost of services and rate of the interests on bank deposits accurately.

C. Research Purposes

The main objectives of this research are:

a. Check the cost of money in the bank to deposit and banking services using ABC model.
b. Review and identify effective practices in the cost of money.
c. Review and identify effective costs in the cost of money.

II. LITERATURE REVIEW

One of the important factors that affect the increase in the cost of banking services and payment facilities by banks is the final price of money. In recent years, the expensive bank loans caused the banking systems to be criticized by consumers and businesses. On the other hand, it should be stated that the prices in our country are on average of about 13 to 14%, the average of the final price of money to state banks, about 12 to 13% and for private banks, 17 to 18% [12].

In this study, the cost of money in the bank has been studied employing the ABC model. This research focuses on the emergence of new technologies in the management of fees. The essential point to be kept in mind is that, the efforts of past and current management accounting and coordinated steps have been taken in the form of a gradual evolution. New approaches to the organization and development of advanced manufacturing technologies have been highlighted [3].

Cost management is a new concept of proper use of resources in order to create value for the customer. Cost management and information analysis can shape the process of re-engineering and its continuous improvement [6]. The knowledge is acquired through identifying activities and cost allocating and this led to the emergence of a new method of costing called ABC.

The general trend is to change the attitude of the international large economic institutions from mass production to produce quality approach to customer needs. This attitude is primarily due to increased competition in the global business environment and customer-oriented concept is increasingly prominent [2].

Today's customer is increasingly seen as the key to success in the international market. Combining the reduced cost and improvement in products quality in an appropriate and reasonable way determines customers' satisfaction. However, the profitability and the growth and success of an organization in today's competitive conditions strongly depends on the amount of sales and the beginning of the cycle of economic enterprises with customer needs market share and sales [4].

In a study titled "To investigate the relationship between credit risk with the cost of money in the Agricultural Bank, a case study in Kerman-Iran," it was stated that as the finished cost of money represents accurate management of resources and consumptions of the bank and the credit risk demonstrates

the management of deposits and payments, the relation between these two is an efficient approach to measure the managers' efficiency [9].

In a study titled "The determination of an optimal combination of resources and its impact on the cost of money in the National Bank of Iran", it was stated that considering that the cost of money reflects the proper management of the cost of the bank and the arrangement and the composition of the bank can minimize the cost of money, then e mentioned study investigated the optimal mix of resources and its impact on the cost of money in the national bank of Iran [10].

In a study entitled "Feasibility study model designed to calculate the cost of bank deposits as ABC: The Case of Refah Bank of Iran" it was stated that the changes made in internal and external businesses and organizations and the impact of factors such as intensified competitions and inadequacy of traditional accounting system provide the information needed for planning and decision making and controlling management [14].

A. The Definition of ABC

The accounting literature different definitions of ABC is provided: Hilton writes, "activity-based costing method in which costs based on the proportion spent activities by each product, from a tank costs are allocated to the various products" [1]. Deakin also believes that "activity-based costing is a costing method that the cost of products from Total cost of activities which are conducive to making the product obtains" [4]. From the perspective of Chat Cheen and Fronti, "activity-based costing is a costing model that identifies the cost pools, or activity centers, in an organization, the allocation of costs to products and services based on the number of events or transactions involved in the process of providing a product or service of their action" [5].

B. History of ABC

During the last decade, a large number of companies have revised their cost accounting system. These revisions are mainly due to the company's competitive business environment to provide high quality, excellent service and reasonable sales price.

Gaining competition opportunities was attended more than determining the price of products when the financial information was provided to the managers. This change in attitude (use of appropriate system of internal expectations of higher costs), has already met the needs of internal and external management needs. As a result, the existing costing systems born. Each of these three generations has an important role in providing new information on the companies [5].

Earlier costing system, that existed before the 1980, was emphasized mostly planning, control, decision-making, and the cost of goods. The weaknesses of this system gradually are known and documented [11]. However, the weaknesses leading to the generation of ABC system are given in Table I. In the first generation of ABC system, the cost factor was determined based on the amount and rate of transfer of the work.

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TABLE I
COMPARISON OF THREE GENERATIONS OF ACTIVITY BASED COSTING SYSTEM

Third generation	Second generation	First generation	Basis of comparison
Business Units	Cost center	Cost center	Structure
Based on the company	Based on the Operations	Based on the product	activities
Domestic and foreign	production and administrative operations	Production	Costs
Costing the value chain	The cost of operations	The costing of product	Accuracy
Connected	Connected	No connection	Community activity
Domestic and foreign	Internal	Internal	Cost basis
Business Units	Cost center	Cost center	Planning
Business Units	Cost center	Cost center	Controlling
Strategic	Tactical	Tactical	Analyzing
Company	operation	Product	Hierarchy

Accuracy in product cost information is necessary to create long-term profitability. Revisions to the operations were carried out to change the final price of the products effectively. These revisions included the manufacturing operations, such as production and administrative costs too. These autonomous approaches to the cost of goods were not allowing the organizations to plan appropriate methods to be used. The second generation of ABC system was developed according to the reasons in Table I [13].

The third generation of ABC system presented in Table I considers a company as an economic entity and examines its relationship with domestic and foreign companies. In this system, attention is given to the entities. The main question is how a company can provide added value to a product or service. In this system, cost factors are considered in a way that they are used to identify the competitive strategies by analyzing the value chain.

A. Summary of Framework of the Study

In the late 1960s and early 1970s, some accounting writers pointed to the relationship between activity and costs. But in the 1980s, the professionals and academician's attention was given to show the weakness of the accounting systems in providing accurate information. The focus was mainly based on the appearance of 3 main parts. The first part was the latest changes in the modern technologies and the new manufacturing mechanisms in the countries like Japan etc. The second structure in the 1980s was that many corporate executives' philosophy underwent major changes and in addition to profitability, compete globally, increase customer satisfaction, emphasis on quality control and cost reduction were among the principal objectives. The third structure was that some of the accounting authors describe a new space, a variety of roles in technology and new views of their managers. The authors also claim that traditional cost accounting system not only meets the needs of managers and executives, but using them make managers confused and make wrong decisions. Subsequently, the authors attempted to introduce a new system of ABC, respectively. The need for operational information about costs, the introduction of the emergence of the ABC system provides two-dimensional. This new approach is certainly in order to provide useful information to achieve the reform goals came inside and outside the organization. It states the allocation of resources to activities.

III. RESEARCH METHODS

Being a descriptive research, parametric and non-parametric tests are used for the practical implementation of the research. All information is collected by interviews, debates and observations. We applied both independent and dependent variables to advance the goals of the research which are explained widely in the following. On the basis of data collection and classification, present research is a descriptive one. This research would be considered as a 'practical' one because it provides a model to calculate the cost of money in EN Bank [15].

A. Research Tools

The measurement in this study is the theoretical basis of accounting. To examine the ABC method and the system of cost in the EN Banks, its data analyzed, processed and interpreted.

B. Conceptual Model

The ABC system structure components provide cost and operational information about the activities going on in the organization. These factors can be modified to respond to questions related to the identification of opportunities. According to the process in ABC, ABC two-dimensional model can be introduced as follows: The horizontal section in Fig. 1 illustrates a process perspective of the ABC model. This view provides information about the work of an activity and its relations with other activities. The process of cost allocation perspective affects in two ways. These include cost driver and performance evaluation. The cost driver would be spent for the purpose of cost allocation activities. The performance evaluation would be used to assess the effectiveness of activities in achieving the purpose of cost. Thus, efforts to achieve the cost target (services) for a chain of activities are related to reach the goal. For example, the relation among the activities providing the educational services in the university system is shown in Fig. 2.

Fig. 3 shows a series of activities that are linked together to perform an aim. In this figure, each activity has its cost driver and a performance measurement to determine its function. Activities are linked together, so that each activity affects the performance of subsequent activities.

Cost allocation perspective provides information about resources, activities and target cost. The basic premise of this view is to reach the target cost (service or product). It needs to perform activities and consume resources for them. In this view, the costs flow from the resources to activities. For better understanding, the main elements of this approach and its mechanism are described and discussed.

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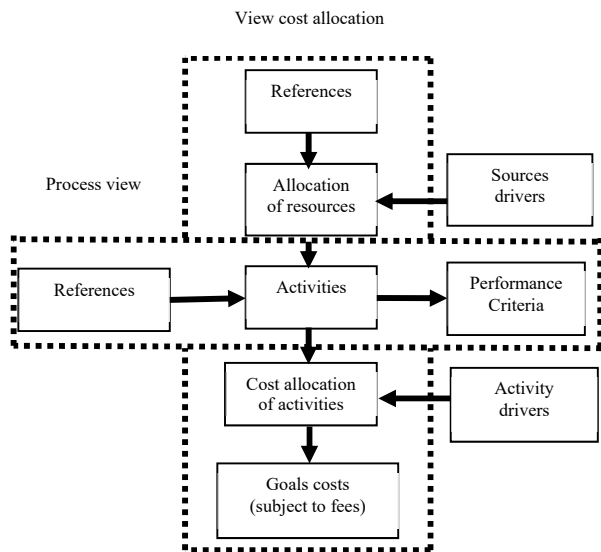Vol:10, No:7, 2016

View cost allocation

Fig. 1 Conceptual model

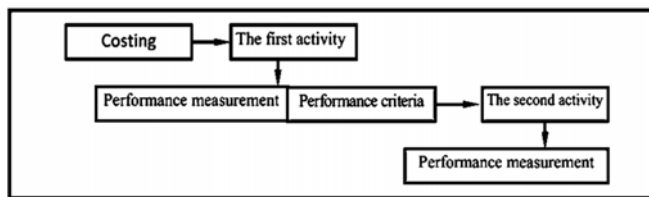Fig. 2 Chain of activities in a process perspective the ABC model [8]

Fig. 3 Internal communication activities in the ABC system and the impact of the performance criteria of the cost driver [7]

1. Reference

Sources are the economic elements that will be consumed to function. They are the causes of cost. In the education system, the sources are the teachers, faculty members and staff.

2. Resource Driver

Resources Drivers are the relationship between resources and activities. Using this method helps us to share those resources in every part of the activities. In the ABC system, determining the resources to share costs is important and fundamental. For example, sharing the costs of a college education among the students could be based on "the number of students in each discipline".

3. Activity Drivers

Activity Drivers are factors to allocate activities for the purpose of cost. This index measures the required activities to provide a service from beginning to end.

4. Cost Object

The Cost Object is the final stage in the process of cost allocation in the ABC system. It is the starting point for other activities. The goals of the cost are to consume resources and

activities in an organization to provide the services or outputs each organization creates. The purpose of the cost provides critical information about provided services.

IV. ANALYSIS OF THE RESULTS

For this study, two-dimensional pattern of ABC is used. The cost allocation and processing are two patterns considered in this study. The underlying assumption of the cost allocation approach is that the organization needs a series of activities. The system also provides information about the cost and fees which can be a great help to managers to make decisions.

In the traditional costing systems, generally through the creation of cost centers, all operating and non-operating costs of different circles are divided into a number of products or services to determine the cost of the product. In these systems, there is no direct link between the activities for products or services as well as the financial resources to these activities. As a result, the cost of the product which directly reflects the activity and values of the company is not used. The ABC system solves these shortcomings through the "direct" costs in an organization with operational activities. From a practical standpoint, ABC causal relationship between costs and activities is required for crop production for the company to generate economic value. It uses multiple factors instead of using a single one. It specifies the place of the expenditures and its rates. Then it uses these rates to produce a product or provide a service. Activities that take place within an organization can be divided into two main groups:

(1) Direct action
(2) Factory overhead activities

The first group includes the following activities directly associated with the manufacturing.

a. Inputs (such as receiving raw materials directly)
b. Operations (such as manufacturing)
c. After sales services
d. Marketing and Sales
e. Outputs (such as finished goods)

Factory's activities directly support and relate their products, customers and maintain their market. The centers of cost-sharing activities may be financial or non-financial. These criteria would be the successful implementation of a company's strategy.

A. Calculating the Cost

In this part of the study, the cost of money and services at the EN Bank are calculated using traditional and activity-based methods. To do this, the operating costs of financial units are collected. Operating costs of institutions and organizations include their main activities. Iranian commercial banks interest-free banking law (enacted in 1983) can be applied to accept deposits under each of the following categories:

(1) The deposits loan
a. The current
b. Saving
(2) The term deposits investment
a. Short-term investment deposits

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b. Long-term investment deposits (one year to five years)

These deposits are the main source of banks. Additional sources are deposits for guarantees, letters of credit, transactions deposit and such other activities that are received by banks. Summary of the deposits are provided in Table II.

TABLE II
THE REMAINED AVERAGE OF THE EN BANK DEPOSITS 2012-2013 YEARS
(THE FIGURES IN BILLION RIALS)

2013		2012		Type of deposits
Percent	Amount	Percent	Amount	
29%	10,235	28%	7,318	the current interest-free loan
15%	5,325	15%	4,642	Loan savings
17%	6,214	17%	5,245	Short-term investments
21%	7,654	21%	6,214	Long-term investments
18%	6,354	19%	5,745	Other deposits

1. Classification of Costs in the Bank

As it is given in Table III, the cost of commercial banks can be divided into two main groups:
(1) Operating costs (direct costs)
(2) Non-operating costs (indirect costs / overheads)

The direct operating costs and expenses, interest paid to depositors, prizes and savings deposits are interest-free loans. Like other institutions and companies, banks also have a series of non-operating costs. Indirect costs are the bank's personnel costs, administrative costs, depreciation costs and doubtful debt costs.

TABLE III
EN BANK COSTS 2012-2013 (THE FIGURES IN MILLION RIALS)

2013	2012	Types of cost	Row
2,168,745	1,825,267	Interest paid to depositors	1
658,745	567,854	Cost prizes loan	2
26·754	24,524	Doubtful debt costs	3
75·489	72,452	Depreciation cost	4
12·658	10,358	Personnel costs	5
8·675	6,452	Administrative costs	6
2,951,066	2,506,907	Total	

B. Analytical Model Costing

Deposits costs in the banks and production units are the operating costs and overhead costs. To allocate the non-operational cost on deposits following stages should be followed:

1. First Stage

In the first stage, the overhead costs are allocated to three tanks:
(1) The first tank includes the cost of direct and indirect activities of employees. These expenses include the following:
a. Personnel costs, including staff salaries, fees, specials etc.
b. Some administrative costs, including the press, supplies and stationary, staff training, staff insurance, fuel and lighting, rent, maintenance, communications, staff uniforms and so on.
(2) The second tank includes the costs related to the volume of deposits:
a. Other administrative costs, including insurance fund,

transportation Banknotes, costs protection and so on.
b. Doubtful debt costs
(3) The third tank cost includes the amortization.

2. Second Stage

In the second stage, the incentives for the allocation of costs accumulating in cost tanks of products are used. Allocating costs to each tank is as follows:
(1) The costs of the first tanks are allocated based on the number of documents associated with each category of deposits.
(2) The costs of second tank are allocated based on the average remained deposits.
(3) The costs of third tank are allocated based on the number of documents.

TABLE IV
COST OF EACH DEPOSIT OF OPERATING COSTS

Percent of each deposits of operating costs	deposits
17.26	the current interest-free loan
17.76	Loan savings
13.38	Short-term investments
16.58	Long-term investments deposits (one year)
22.39	Long-term investment deposits (five years)
1.78	Other deposits

TABLE V
ABSORPTION RATE OF NON-OPERATING COST FOR EACH DEPOSITS BANK

Absorption rate of costs	deposits
68.47	the current interest-free loan
17.25	Loan savings
7.18	Short-term investments
3.20	Long-term investment deposits (one year)
2.46	Long-term investment deposits (five years)
1.44	Other deposits

C. Calculating the Rate of Allocation

The majority of overhead costs should be allocated based on the employee's activities. Table IV represents the cost of deposits. Table V represents the absorption rate for each deposit of non-operating costs. This rate is according to the Bank's expert's opinion and allocation of activities to each process. The amount of bank's non-operational costs is also presented in Table VI.

D. Calculating the Cost of the Deposits in Terms of Non-Operating Costs

In order to calculate the rate of indirect costs for deposits, the share of each deposit from total indirect cost should be calculated. Then, the share of each deposit are obtained by multiplying stimulus cost and overhead cost. Summation of allocated overhead costs from each deposit tank gives the total allocated overhead cost. For example, we must assign 23% of the cost of salary to the current accounts deposits. Finally, indirect costs of each deposit are divided by total free resources (deposits available for investment) to obtain the rate of indirect cost for each unit. Calculation of this point is shown in Table VII.

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TABLE VI
THE NON-OPERATING COSTS OF THE BANK

total	Administrative	Doubtful debt	Depreciation	Personnel	Costs
123,576,000,000	8,675,000,000	26,754,000,000	75,489,000,000	12,658,000,000	Amount to Rials

The banks should keep some percentage of their deposit in the Central Bank of Iran. They also must keep some amount in their branches to return as cash to their customers. As the part of the bank deposits are blocked for legal deposits and it cannot be used for investment, it provides additional costs to the banks. Receiving 15 annual interest from The Central Bank for these deposits reduces the total cost for the banks. After allocation of indirect costs to each deposit, the cost of each deposit is calculated as a percentage of indirect cost. The results are shown in Table VIII.

TABLE VII
THE AMOUNT OF NON-OPERATING COSTS ASSIGNED TO EACH DEPOSIT BASED ON THE ABSORPTION RATE

total	Administrative	Doubtful debt	Depreciation	Personnel	deposits
84,612,487,200	5,939,772,500	18,318,463,800	51,687,318,300	8,666,932,600	the current interest-free loan
21,316,860,000	1,496,437,500	4,615,065,000	13,021,852,500	2,183,505,000	Loan savings
8,872,756,800	622,865,000	1,920,937,200	5,420,110,200	908,844,400	Short-term investments
3,954,432,000	277,600,000	856,128,000	2,415,648,000	405,056,000	Long-term investment deposits(one year)
3,039,969,600	213,405,000	658,148,400	1,857,029,400	311,386,800	Long-term investment deposits (five years)
1,779,494,400	124,920,000	385,257,600	1,087,041,600	182,275,200	Other deposits

E. Calculating the Cost of the Current Deposits Interest-Free Loan

The cost of current deposits can be calculated as:

$$R_{t,DD} = R_{DD} = \frac{[(C_a \times r_{DD}) + (C_v \times V_{DD}/V_t)] - (V_{DD} \times S_{DD} \times rS)}{V_{DD}[1-(S_{DD}+L_{DD})]} \quad (1)$$

TABLE VIII
THE COST FOR EACH DEPOSITS FROM NON-OPERATING COSTS

The percentage of each deposit of the non-operating costs	the amount of attracted costs	deposits
0.40	84,612,487,200	the current interest-free loan
0.10	21,316,860,000	Loan savings
0.04	8,872,756,800	Short-term investments
0.02	3,954,432,000	Long-term investment deposits (one year)
0.01	3,039,969,600	Long-term investment deposits (five years)
0.01	1,779,494,400	Other deposits
0.41	87,654,000,000	Other processes
100	211,230,000,000	total

$R_{t,DD}$ is rate of current deposits' costs, V_{DD} is the rate of non-operational current deposits' cost, R_{DD} is the average current deposits, V_t is the total average deposit remained, C_a is the non-operating cost of subordinate employees' activities, S_{DD} is legal deposit ratio for current deposits, r_{DD} is allocation rate (C_a) in current interest-free loan deposits, r_S is the legal deposit interest rates, C_v is the non-operating costs of the volume of deposits, L_{DD} is current interest-free loan of maintenance deposits for liquidity.

F. Calculating the Cost of the Loan Savings Deposits

Loan savings deposits have both operating and non-operating costs. Operating costs are the awarded prizes to the owners of the deposits. Non-operating costs are administrative affairs and the services provided to owners of such deposits. Therefore, the cost of the loan savings deposits can be calculated as:

$$R_{t,SD} = R_{SD} + R'_{SD} \quad (2)$$

where $R_{t,SD}$ is the loan savings deposit rates, R_{SD} is the rate of non-operating of deposit's cost for loan savings, R'_{SD} is the rate of operating costs for saving deposit's loan. Rate of non-operating costs are calculated as:

$$R_{SD} = \frac{[(C_a \times r_{SD}) + (C_v \times V_{SD}/V_t)] - (V_{SD} \times S_{SD} \times r_{SD})}{V_{SD}[1-(S_{SD}+L_{SD})]} \quad (3)$$

where r_{SD} is allocation rate of (C_a) to deposit savings loan, S_{SD} is the ratio of legal deposit to savings deposits loan, V_{SD} is the average savings deposits loan, L_{SD} is the maintenance ratio of savings deposits loan for liquidity.

G. Calculating the Cost of Short-Term Investment Deposits

This deposit also has operating costs (interest paid to depositors) and non-operational costs. The cost for this type of deposit can be calculated by:

$$R_{t,SHD} = R_{SHD} + R'_{SHD} \quad (4)$$

where $R_{t,SHD}$ is the short-term investment deposit rates, R'_{SHD} is the operating costs rate for short-term investment deposits, R_{SHD} is the non-operating costs rate for short-term investment deposits.

The rate of non-operating costs is calculated as:

$$R_{SHD} = \frac{[(C_a \times r_{SHD}) + (C_v \times V_{SHD}/V_t)] - (V_{SHD} \times S_{SHD} \times r_S)}{V_{SHD}[1-(S_{SHD}+L_{SHD})]} \quad (5)$$

where r_{SHD} is allocation rate of (C_a) in short-term investment deposits, S_{SHD} is the legal deposits ratio of short-term investments, V_{SHD} is the average short-term investment deposits, L_{SHD} is the maintenance ratio of short-term investment deposits for liquidity.

H. Calculating the Cost of Long-Term Investment Deposits

Long-term investment deposits (i.e. one year, two years,

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three years, four years or five years) as well as short-term investment deposits and savings loan has two types of operating costs (interest paid to depositors) and non-operational costs. The costs of long-term investment deposits are calculated by:

$$R_{t,LiD} = R_{LiD} + R'_{LiD} \qquad i = 1,2 \qquad (6)$$

where R_t, L_{iD} are the long-term investment deposit rates, R'_{LiD} is the operating costs rate for the long-term investment deposits for i^{th} year, R_{LiD} is the non-operating costs rate for the long-term investment deposits for i^{th} years. Non-operating costs rate of long-term investment deposits can also be obtained from:

$$R_{LiD} = \frac{[(C_a \times r_{LiD}) + (C_v \times V_{LiD}/V_t)] - (V_{LiD} \times S_{LiD} \times r_S)}{V_{LiD}[1-(S_{LiD} + L_{LiD})]} \qquad (7)$$

where r_{LiD} is the allocation rate for (C_a) to long-term investment deposits for i^{th} year, V_{LiD} is the average of the long-term investment deposits for i^{th} year, S_{LiD} is the legal deposits ratio of the long-term investment deposits for i^{th} year, L_{LiD} is the maintenance ratio of the long-term investment deposits for i^{th} year to liquidity.

I. Calculating the Cost of Other Deposits

These deposits consist the deposit guarantee and letter of credit have no direct operating costs. They are involved with indirect non-operating expenses. The cost of other deposits is calculated by:

$$R_{t,OD} = R_{OD} = \frac{[(C_a \times r_{OD}) + (C_v \times V_{OD}/V_t)] - (V_{OD} \times S_{OD} \times r_S)}{V_{OD}[1-(S_{OD} + L_{OD})]} \qquad (8)$$

where R_{tOD} is the rate for other deposit, R_{OD} is rate of other non-operating costs deposits, r_{OD} is the allocation rate for (C_a) in other deposits, V_{OD} is the average for other deposits, S_{OD} is the legal deposit ratio for other deposits, L_{OD} is the maintenance ratio for other deposits for liquidity.

Table IX shows the cost of each EN Bank deposit between 2012 and 2013 based on the designed models and available data for these years. These quantities are in percentages and represent the cost ratio for each deposits in the bank. This means that in 2012, the rate of interest for the five-year long-term investment deposit is 22.4%. Therefore, based on these rates, the announced interest for five-year long term deposits is 24% or more. In other words, these rates are basis for calculating the value, the price of money, facilities and bank deposits. In this study, this section is calculated as a percentage of attracting 10,000 Rials.

The cost of each deposit shows that, to attract each Rial deposit (including loans savings, current deposit loan, short-term investments deposit, long-term investment in one year and five-year deposit and other deposits) a few percent must be spent. This amount is necessary for any bank to attract deposits. In other words, the cost of money in the EN Bank is between 13 and 22%. The results show that the cost of private banks is more than state-owned banks. This means that private

banks incur additional fees to attract money and deposits.

TABLE IX
COST OF THE EN BANK DEPOSITS IN 2012-2013 (BASED ON PERCENT)

2013		2012		Type of deposit	
The cost of a Rial 10,000 deposit	Percent	The cost of a Rial 10,000 deposit	Percent		
Rials 1,730	17/3	Rials 1,680	16/8	The current interest-free loan	
Rials 1,780	17/8	Rials 1,690	16/9	Loan savings	
Rials 1,340	13/4	Rials 1,260	12/6	Short-term investments	
Rials 1,660	16/6	Rials 1,620	16/2	One year	Long-term investment
Rials 2,240	22/4	Rials 2,160	21/6	Five years	
Rials 180	1/8	Rials 120	1/2	Other deposits	

V. CONCLUSION

The study delves into the foundations of a batch of statements that emerged from the research assessment on the impact of transformational leadership on organizational effectiveness.

Basically, evaluation of the final cost of goods, provided services and the time spent on such issues, is a complex process. Because of this complexity the cost evaluation in the banks are based on obtaining the total finished price of money. It is interesting to mention that in most of the banks, the cost evaluation is based on the unreal rates. Since any mistake in calculating the cost of money in the bank (even if it is very small in amount) leads to huge mistakes while making decisions in large scales, this research would be helpful for decision makers. Since the main activity of financial institutions is collecting deposits and providing loans, therefore, the banks had to reduce their major costs (operating costs). They should try to collect funds inexpensively. The banks are also advised to calculate the cost of their money regularly and send a report to the Ministry of Economic Affairs and Assets.

According to the results, the most practical offer to the EN Bank is using the ABC system to calculate the cost of money. This leads to improved pricing right, more transparency and improved cost estimation. ABC system will be effective only if all the involved parties, understand and remain committed to its implementation. In the meantime, education and empowerment plays a major role in the learning process. Training the managers and employees plays an important role. It eliminates their resistance and gives them commitment. Therefore, it is suggested to train the employees with the new methods of costing and accounting. According to the results of the research, the following suggestions are given:

(1) Using a multi-bank accounting system: Today, many financial institutions around the world are attempted to use multiple accounting systems. The system could include the following systems:

a. A traditional accounting system as a basic accounting system. Using the conventional methods in recording transactions and the allocation of costs, this system may provide the possibility of the financial statements to be used by foreigners.

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b. A system of ABC and other accounting methods to measure the true cost of service, customer and organizational units. This provides accurate information (financial and non-financial) to the relevant managers when making decisions.

(2) The establishment of a comprehensive costing and income system in the bank: The main requirement for the establishment of a system of ABC (generally every good and efficient accounting system), is to have a comprehensive costing and income system in accordance with its needs. The accounting information systems in banks are often not designed to have the ability to supply the information needed to measure and control the costs associated with their activities.

(3) Creating float rates facilities and banking services fees: The central banks must provide a floating rate for the bank's interest rate for banks; so that the profitability is done properly and there would be no problem between the banks and the depositors.

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