Arab Journal of Administrative Sciences

2005, Vol. 12, No. 1, 109 - 143

Munir S. Mohamad

Higher College of Technology
Oman, Muscat

IMPROVING OMANI BANKS EFFICIENCY USING ACTIVITY-BASED COSTING TECHNIQUE

Key Words

Activity-Based Costing; Efficiency in Financial Institutions; Banking Sector Performance.

Abstract

The main objective of this study is to investigate empirically the implications of the use of ABC technique for the banking sector in Oman, assuming that there is a positive correlation between the careful application of ABC and both profitability and efficiency. The results show that the successful implementation of ABC leads to significant cost reduction in many areas of banking activities. The results also indicate that Omani banks do not possess sufficient experience in ABC, as there is a shortage of knowledge and guided application in this respect.

Introduction

Efficiency is always a matter of concern for all economic entities. It is a key concept for financial institutions. It has long been studied, and many methods have been used to measure and evaluate it. Efficiency, in general, is defined as the ability of an establishment to produce as many as possible outputs from the least possible inputs. Regardless the technique used to evaluate efficiency, there are two concepts of measures, input-oriented measures and out-put oriented measures (Coelli & Battese, 1998). The first is input oriented, which seeks inputs minimization (i.e., cost reduction); the other is output oriented, which emphasizes outputs maximization.

Banking institutions, including Omani ones, have employed some methods and techniques to measure and evaluate efficiency of their activities; the most obvious one has been the financial ratios analysis.

Financial ratios can indicate the level of performance of different banking activities. However, this method has its shortcomings. First, financial ratios are separate indicators and can-

Submitted February 2004, accepted July 2004.

not give a comprehensive assessment of the level of a bank performance. Thus, one cannot decide whether the overall efficiency of the bank is good or not. Second, selecting appropriate standards for measurement and comparison is somewhat difficult and subjective in many cases. Third, financial ratios show the general areas of weaknesses, but they cannot indicate precisely the exact shortcomings and their areas (Al Shammari &Anwar, 1998:5-17). Finally, financial ratios remove the effect of return on scale. In other words, a ratio of R. 3000 to R. 15000 is the same with a ratio of R. 8000 to R. 40000; it is 20% for both of them. Thus, there is no distinction between a bank with a capital or fixed assets of a billion Rials and a bank with 5000 Rials as a capital since the ratio of profitability is the same. This would damage the whole picture of performance evaluation.

In financial institutions, as it is well known, most of the costs are indirect (i.e. overhead costs). Traditional methods of cost accounting used for allocating overhead costs to different activities (i.e. absorption costing and marginal costing) are still inadequate. Many activities are over-charged, while others are under-charged (ACCA, 2003:39), (Horngren *et al.*, 1999:136). The variety of (FOH) costs, the different methods used to allocate them, and the subjectivity of the selection of standards of distribution on activities have been some of the main reasons behind the inaccuracy in allocating these costs.

Criticism has, for many years, been directed to the traditional methods of cost allocation. They do not reflect the way specific activities in an automated plant cause variations in major cost categories (Blocher, et. al., 2002:103-106). This has resulted, over the last two decades, in the development of a new technique for cost allocation called Activity-Based Costing (ABC). This technique uses activities as a basis for cost allocation rather than departments or cost centers. It is intended to solve the problem of inaccuracy and subjectivity of costs distribution made by other traditional methods of cost accounting. Nowadays, many entities, including financial institutions, in many countries, use this technique for allocating overhead cost with successful results (Mohammad, 2002; Kerremants *et al.*, 1991; Raffish, 1991).

In Oman, as it is the case with many other countries, the banking sector plays an important role in the national economy. Tables (1& 2 - App.) show the banks operating in Oman and their financial capacity. Until the end of 2001, the total paid-in capital of this sector approached R. 297.8 Million (Oman Rial is equal to approximately $ 2.58) with a market value of R. 441M and gross banking credit amounting to R. 3250 M (Annual Statistical Report- ASR, 2002: 384). During the last few years, the contribution of this sector to the Gross National Product has increased from 9.2 % in 1975 to 57.2 % in 1998, its share to the total final consumption and capital formation has also grown dramatically from 66.9 % in 1975 to 3116.3 % in 1998 (Central bank of Oman, -CBO, 2001).

The level of efficiency with which this sector is operating its activities and utilizing its resources has become a matter of concern for all concerned parties. This necessitates the application of more sophisticated methods and techniques for appraising performance and motivating further efficiency in its operations.

Literature Survey

Activity-Based Information System has been used for the last two decades. The requirements of this system, its main ingredients and steps of its application were discussed by Johnson (1988). His study investigated the relation between this system and Zero-Base Budgeting system (ZBB). The features of the system and its merits were also discussed by Jeans & Morrow (1989); Ostrenga (1990); Cooper (1991); Lewis (1991); Kaplan (1992); and Briers *et al.*, (1997); and Horngren *et al.*, (2000:140).

For strategic costing, the system is considered as an effective tool for long-term planning and cost reduction (Cooper & Slagmuulder, 1999; Shank *et al.*, 1992). Skills necessary to apply the system and the organizational changes needed were discussed by Cokins, (1999); Gering (1999); and Gossline (1997).

In Arab countries, some studies have been published over the last decade. These studies have emphasized the potential advantages that might be gained from the use of (ABC) in industry and both financial and transportation sectors (Jebaly, 1993; Yousif, 1998). An empirical study about the implications of the use of (ABC) in Jordanian banking institutions was also conducted by Mohammad (2003:39-76). He concluded that there are many areas of banking activities in which Jordanian banks can make significant cost reductions, thus, improving the profitability. The study revealed that the analysis of a banks activities on the product/ customer basis serves a good tool for management to identify the activities, products, and customers that contribute effectively to the banks profitability and, thus, should be encouraged. Simultaneously, the analysis identified those activities and products whose contribution to the banks profitability is low or limited, providing the managers with the benchmark to decide which action is to be taken to reduce, eliminate, or develop them, in order to improve their contribution to the banks profitability.

A similar approach of the analysis used for Jordanian banks is employed in this study for Omani banks since the activities, products, and services provided are the same, and since they are subject to a somewhat similar market forces. Using the same approach facilitates comparisons between the two sectors in both countries on a valid basis and helps tracing the similarities and differences between them. This will also assist further investigation of the implication of ABC application in other Arab countries if a similar approach is used for analysis to find out common problems, difficulties and obstacles facing them and to seek an appropriate joint action.

Another study was conducted by Mohammad (2002) to investigate the potentials of (ABC) application in insurance companies. Jordanian companies were taken as the sample of study, and one company was selected to apply the system. The main categories of insurance activities were identified, i.e. life insurance, reinsurance, fire insurance, marine insurance, cars and accidents insurance as well as other service departments such as the personnel affairs department. Sub-activities were also identified, i.e. credit accounts, insurance accounts, product development, advertisement and media, strategic planning and so on. The results indicated that there are many opportunities to reduce costs in some activities, for example, cars and accidents insurance, because of its high cost in comparison with its benefit. As a result, fifteen opportunities for cost reduction, activity elimination, and improvements in conducting the activities were identified.

Research Hypotheses

Although the literature on cost accounting is rich in the use of cost accounting models and methods for cost allocation in industrial and trade companies including the (ABC) technique, the employment of this technique as a new approach for cost allocation in banking institutions is still rare. This may be attributed to many reasons, including the difficulty to identify the banking specific activities. The scarcity of the literature in this area, the cost of (ABC) implementation, and the absence of guided applications may also give another justification for this. Thus, serious attempts to utilize this technique in Omani banks, as it is the case with many other Arab countries, have been very limited.

Based upon the above, the literature lacks an empirical analysis that should be drawn to examine the effect of the use of (ABC) technique on the profitability and efficiency of the banking system in Oman. This study is aimed at shedding light on this issue by testing the following hypotheses, taking into consideration that the profitability represents the main parameter for efficiency:

(HO): There is a positive correlation between the implementation of (ABC) technique for cost allocation and the efficiency in Omani Banks. To test this main hypothesis, it is divided into three sup-hypotheses:

(Ho1): The majority of Omani banks lack the implementation of (ABC) technique for cost allocation.

(Ho2): One of the main reasons for this lack has been the absence of benchmarking application and sufficient knowledge of its concepts.

(Ho3): The use of (ABC) technique for Omani banks leads to improve the profitability and efficiency through cost reduction and optimize utility of scarce economic resources. This can be achieved through the identification of the profitable and non-profitable activities.

Research Structure

Four main parts form this research:

Part (1): Introduction, literature survey, and research methodology.

Part (2): Brief summary of the theoretical background on ABC technique.

Part (3): Empirical part of the study, encompassing two sections: (1) discussion of the results of the questionnaire prepared to test the first and second hypotheses of the research and (2) implementation of (ABC) system in a particular Omani bank.

Part (4): Conclusions and recommendations.

(ABC) - Theoretical Background

In his definition to the (ABC) technique, Horngren *et al*., (2000: 140) indicates "Activity-based costing technique is the method which leads to improve the traditional methods of cost allocation by directing the emphasis towards the sub-activities as they are the main objective for cost allocation".

According to (ABC), indirect costs are collected, aggregated and distributed on the basis of activities performed rather than on departments or functions. Activities, in this regard, are those that cause the cost. Hence, the term used to describe the factor creating the cost is (cost driver). Cost driver is used to assign the cost attached to each activity center. Cost driver provides a good explanation of the costs in each activity cost pool (Drury, 2000: 343). Linking costs to activities is made after aggregating the costs and classifying them into consistent groups (cost pools). This needs the entity to keep the main accounting records (ledger accounts) to show accounts balances of expenditures and revenues in such a way that summarizes the operations and transactions performed during the financial period.

The analysis of an activity into sub-activities serves a technical way that gives the management a better understanding of how the factors affect costs and may lead to increase or reduce them. In addition, (ABC) technique can help management to distinguish between the activities which add value to the product on the one hand, and the activities which exhaust resources without obvious benefit, on the other (Garison *et al*.,1999).

To calculate the profitability of a bank on customers basis, it is necessary to keep regular records for cost and revenues of each customer. The identification of information prepared on customers related profitability basis or product related profitability basis may involve three levels of management: (1) accounts officer; (2) customer-related manager; and (3) product manager. Each of these should concentrate on a particular type of information. Thus, a detailed customer database is to be maintained as a part of the accounting system of information to enable immediate updating of its elements (Vaassen, 2002: 227).

Calculation of product or customers related profitability may be built on the basis of multiple directions analysis of revenues and costs budgets, in addition to the product and customers related activities provided by the bank. Identification of the customer-related costs and revenues is very helpful, particularly for the bank strategic planning. Such identification of the profitable and non-profitable activities will make any subsequent reform easier (David, 1997; Ronald, 1997).

Most of the operational expenses in the banking system can be traced and linked to one main product or main service. However, some of these expenses are incurred due to producing service offered to a particular customer or a particular group of customers (Mays *et al.*, 1994; Kaplan *et al.*, 1988; David, 1997).

Income, in general, may vary between banks depending on the customers type and should, therefore, be identified independently. Banks income may be generated from: (1) interest income, (2) income from fees and commissions, (3) interest from trading activities, and (4) interest from investment. The first one represents the difference between interest revenues and interest expenses. Many factors should be taken into account when calculating the revenue from interest including the cost of lent money, interest rate prevailing in the market, and the method of receiving the loans and their dates. Analysis of current accounts has also its difficulties because of the continuous change of balances; thus it is necessary to report the credit and debit balances for each account in each transaction, and to calculate the interest for each case.

Calculation of other sources of income as commissions and other services, i.e. credits, foreign currency translation, consultation, and so on, should also be given adequate attention and care.

Profitability may be recognized in different points of time during the process of financial analysis and reporting, and this would depend on the definition of indirect costs. A financial institution may show many sub-headlines of its calculation of profitability, including income calculated on the basis of net cost of customers financing activity (excluding operational costs), customers contribution to the indirect costs, and profitability (including all processes of allocating indirect costs).

Therefore, income may be recognized on the basis of individual customers or groups of customers. It is also possible to attach costs directly to customers by the ratio of benefit gained from the product or as a part of indirect costs. Here, the contribution to indirect costs calculated on the customers basis may give an indicator for many applications that the research attempts to use.

To apply ABC to banks, there are consistent steps to follow. Despite the differences between writers, the general model of ABC technique includes the following main steps (Cooper, 1991:70; Morse & Zemmermen, 1997; Drury, 2000: 343; ACCA, 2003).

Step (1): Identifying the organizations major activities.

Step (2): Collecting Data and defining their specifications.

Step (3): Developing an activity information system.

Step (4): Assembling activity-based information.

Implementation of (ABC) in Omani banks

To test the research hypotheses, the empirical part of the study is divided into two parts. The first is designed to test the first and second hypotheses through a questionnaire (Figure (1) in Appedix). In the second part, an empirical study is conducted on one particular bank to test the third hypothesis, and to examine the applicability of the system to Omani banks.

The questionnaire was distributed to 19 Omani banks registered in Muscat Market for Stock Exchange (MSM), and handed back by 16 banks. Four financial employees and accountants, who varied in their experience and qualifications, were selected from each bank to answer the questions. Altogether, the sample consisted of 64 employees.

To ensure flexibility of the responses given, the questionnaire was designed with a scale of 5 levels, each showed the respondents degree of certainty, i.e. (5) for very strong; (4) for strong; (3) for average; (2) for weak; and (1) for very weak.

Results and Analysis

Results of Questionnaire

(1): Implementation of (ABC) technique:

The information gathered through the questionnaire (part 2) indicates that none of the Omani banks has tried to employ (ABC) for cost allocation, planning, control, and decision-making purposes in a comprehensive way. This information was analyzed on banks basis rather than individual employees basis. It shows that only two banks out of 16 banks have made a simple attempt to allocate indirect expenses (common expenses) on more a objective basis than traditional cost accounting systems. Table (1) explains this information, which indicates that (14) banks do not employ the technique. Interviews made with some officials at the banks revealed that most of the banks use traditional methods to distribute overhead costs that depend on some ratios. Some of the ratios are decided through management experience, some depend on the ability of the banks departments to generate revenues, and others on the size of the departments concerned. The activities performed by the departments have not been subjected to detailed analysis. Customer-related specific costs and revenues seem to be a somewhat difficult issue at the moment.

Table 1 indicates the need to study the reasons for the delay in adopting the system in Oman, in comparison with many other countries where the implementation of the system has benefited from long experience. This will also prove the first hypothesis (Ho1) of the research, which assumes that most of Omani banks lack the implementation of (ABC) system for cost allocation and for other management purposes.

Compared with the experience at Jordanian banks referred to earlier, it is clear that the experience in Jordan has been more obvious and that there is an awareness of applying the system steadily. The case for Omani banks seems to need more time to understand the extent to which this application is necessary.

(2): Factors Limiting (ABC) Implementation:

To test the second hypothesis in this research, the third part of the questionnaire addresses the following question: "In your opinion, what is the likelihood of the following factors in affecting the adoption of (ABC) system in your bank?"

Table 2 summarizes the answers that show the priority of the factors and the ranking significance of each

Table 1
Answers Distribution According
to Extent of (ABC) Implementation

Extent of Implementation	Frequency	Percentage %
Comprehensive	Zero	Zero
Partial	2	12.5%
No	14	87.5%
	16	100%

from the respondents viewpoint. The results indicate that Factor (5) is the most significant with an average of 14.6%. This factor is concerned with the absence of benchmarking application of (ABC). Next comes factor 2, which concerns the lack of suitable knowledge to adopt (ABC) system. The answers to these two factors indicate the need for theoretical and practical information about the (ABC) technique, as well as guided applications. Other factors hold lower degrees of significance as is shown in Table 2 below.

In comparison with the Jordanian experience referred to earlier, many similarities can be observed with some other different significance levels. Table 3 summarizes levels of significance for the respondents answers expressed by percentages, which, in turn, explain the similarities and differences between the two experiences. The results indicate that the priority of the factors affecting the adoption of (ABC) in

Table 2
Priority of Factors Affecting Use of (ABC) System

Sr	Weights	5	4	3	2	1	T. Frequency X Weights	Ratio	Signif. Level
	Factors	Fr.	Fr.	Fr.	Fr.	Fr.			
1	Lack of Necessary Equipment and Technology.	9	9	16	24	6	183	11.2%	5
2	Lack of Suitable knowledge & Information about (ABC) System.	17	28	8	8	3	240	14.7%	2
3	Absence of Organizational Structure Based on Activities	12	23	14	12	3	221	13.5%	4
4	Absence of Skilled and Qualified Personnel.	11	25	16	10	2	225	13.8 %	3
5	Absence of Benchmarking Application of System.	21	24	8	9	2	245	15 %	1
6	Cost of ABC Application is Higher than its Benefits.	5	11	18	22	8	175	10.7%	7
7	Absence of Management Will to Apply System	5	10	28	11	10	181	11.1%	6
8	Absence of Need for ABC System because of Current Accounting Procedures Doing the Job.	2	7	20	28	7	161	10 %	8

both countries is very close, that is, the priority for both is given to factor (5) in the first place and (2) in the second place.

However, factor (4) comes third for Oman, but fourth for Jordan. Also, factor (3) occupies the fourth rank for Oman, but the third for Jordan. This may indicate that the nature of difficulties faced in both countries is somewhat similar.

Based on this analysis, it can be said that the second hypothesis is substantiated. That is, the most important factors affecting the use of (ABC) system in the banks operating in Oman are those concerning the lack of benchmark application and the absence of necessary knowledge about the system.

(ABC) Application in an Omani Bank

To test the third hypothesis, an empirical study of an Omani bank was made. The selection of the bank was based on some factors including size, nature of services provided, and number of customers. The actual name of the Bank is not given according to a management wish. To establish a plan reporting customer-related profitability, it was agreed with the management that the main outcome of the study would enable the bank to (1) produce and report customer-related profitability for a sample of the customers included in this research and (2) to Identify significant objects within the bank activities, which need a careful study as part of a long-term project for system implementation. Application of the model is based on the steps mentioned earlier.

Table 3
Comparison between (ABC) Experiences in Oman & Jordan

Sr.	Factor	Oman	Jordan
1	Lack of Necessary Equipment and Technology.	11.2 %	12.7%
2	Lack of Suitable Knowledge & Information about (ABC) System.	14.7%	14%
3	Absence of Organizational Structure Based on Activities.	13.5%	13.8%
4	Absence of Skilled and Qualified Personnel.	13.8%	13.6%
5	Absence of Benchmarking Application of System.	15%	14.4%
6	Cost of (ABC) Application Higher Benefits.	10.7%	10.4%
7	Absence of Management Will to Apply System	11.1%	11.4%
8	Absence of Need for (ABC) System because of Current Accounting Procedures Doing the Job.	10%	9.7%

(1) Defining Major Activities and Cost Objects:

To build a system of information based on activities, we should identify the bases to use for data collection and analysis. The following bases seem preferable for the purposes of management, individual customers, individual officers responsible for customers accounts, customers job or profession, customers age, and geographical areas of customers.

Table 3 (Appendix) shows a sample of customers names, accounts numbers, and interrelated information gathered from the Bank records. This sample will be subject to analysis in the next steps of application.

A careful study of the bank activities and services indicates that this sample of customers benefit from the following services: borrowing, deposits, investment, and advising services. These services are identified with a high level of management for the purpose of establishing and developing a system for measuring final profitability. The products or services produced by the bank include the following: (1) floating rate borrowings, (2) high rate deposits, (3) current accounts bearing interest, (4) investment accounts, (5) financial advising services, and (6) deposits custody.

To implement (ABC) system, the activities of the Bank are classified into two main categories: (a) Production activities (operational activities) and (b) Assistant activities. Further, the costs of operational activities have been classified into five categories. Table 4 (Appendix) shows these cosrs.

The next step is to define activities measures (indicators). Unlike direct costs, the allocation of common costs to banks activities is often difficult. This is so, particularly for those services produced by counter officers, whose responsibility is to deal with deposits, loans, current accounts, foreign currency translation, and so on. These transactions involve many different common costs such as the costs of cash deposits, costs of withdrawals, costs of purchases orders, telecommunication, etc. It is, therefore, necessary for the bookkeeping system in the bank to be able to identify the account to which the deposit, the loan, or the withdrawals are related. After the analysis of the bank activities, the measures of the activities have been defined and explained in Table 5 (Appendix).

(2) Data Collection and its Specifications

To focus on all the information necessary to establish a comprehensive system of information, the following types of information were gathered for current and future needs: (1) customers and their characteristics, (2) products and services provided classified according to customers, (3) activities and their measures, and (4) costs and income data with the best possible level of details.

(3) Development of Activity Information System

As it is earlier explained, the information system needed in this study is that concerned with customer-related profitability. Therefore, the model used should reflect this fact. Three kinds of data could be included in this model. First, statistical data taken from the bankbooks and records, which is a customer-based data meant to facilitate reporting information on: individual customers basis, accounts keeping officers basis, customers job basis, customers age basis, and customers geographical area.

To facilitate the process of data classification, analysis, and reporting in this study, it is preferable to select one of the available computer programs that use standards spreadsheets. Many programs are available for this purpose, such as Excel or Lotus 1,2,3. These programs are easy to operate by the bank employees. Excel program is employed by this study for this purpose. Statistical data for spreadsheets include: (1) information about customer, Table 3 (Appendix), (2) income on the basis of customer and product, Table 5 (Appendix), (3) activities on the basis of product, (4) customer-related activities, (5) assistant activities, and (6) allocation bases.

(4) Assembling Activity-Based Information

Examining the data collected, we can calculate customer-related profitability using activities-based information. This information provides an adequate picture of the operational costs that are related to products and services provided to individual customers, and are linked to the revenues generated from the interests collected from customers, so that we can develop profitability reports prepared on customers basis.

Cost is analyzed at three levels: (1) operational costs related to product, which are analyzed according to production size, transactions mix, and averages of balances; (2) customer-related costs, which are analyzed on the basis of administrative activities that can be linked to individual customers; and (3) assistance costs. These cannot be attached directly to the activities related to individual customers or products or services, but they represent part of the overall structure of costs in the system.

For the purpose of this study, operational costs related to individual customers and products include the classification of the costs explained in Table 4 (Appendix). These costs include premises costs, information technology costs, and marketing costs, because the bank under study is product or service oriented.

To calculate the contribution, an analysis is made of lending and deposits services, based on the current daily averages of the accounts balances. Against these averages, the interest income and interest expenses are calculated, together with the associated loans fees wherever appropriate.

In the sample bank, the interest is paid on credit balances of current accounts, and charges are applied on the debit balance of these accounts (overdraft). To simplify the calculation, it is assumed that current accounts balances remain as credit or debit during the analysis period. Thus, balances of accounts can be used to define the receivable or payable interest.

The bank charges investment-related services with nominal fees assuming that such services are part of the banking facilities to be offered to its customers. However, the volume of such facilities is often taken into account to decide charges. For this purpose, the calculation of such fees takes into account the changes in the fee averages set-up in light of the changes in the investment portfolio considerations, which should, in their turn, take the changes in the portfolio mix into consideration.

Advisory services are also charged with a specific fee, and calculated on the basis of time spent, number of items serviced, and extent of confidentiality required by customers.

It is also assumed from the analysis presented in Table 5 (Appendix) that the officers responsible for customers accounts should charge those customers according to the standard tariff of fees. Therefore, the fees given up by the bank as a result of the discounts, facilities, or reducing rates of facilities should be recorded by the customer-relations manager and allocated to the customers account to represent the customer-related profit. Simultaneously, any additional expenses or additional time spent by the account manager should be recorded as extra cost to be charged to the customer-related profit account.

Table 6 (Appendix) summarizes the contribution of profitability-assisted costs prepared on customer basis. The Table explains the contribution calculated on product or service basis provided for each customer as well as the costs charged for each one of them (customer-specific costs).

From the Table, it is obvious that these customer-specific costs are charged only for 16 customers. They are linked to either the given up fees (referred to above) or to the additional time spent by the account manager according to the ratio of the effort and time spent in this regard. These customer-specific costs represent an essential part of the overall cost structure allocated to this sample of customers at the bank. These costs added an approximately 25 % to the direct costs related to the product as it is shown in Table 4 (Appendix), i.e. customer-specific costs. These costs are shown in more detail in Table 7 (Appendix), i.e. given up fees and Direct costs).

Produce and Use of Information:

The final stage of ABC implementation is to produce and use the information for the purposes identified. Table 7 (Appendix) shows each customers contribution analyzed on customer and accounts manager basis, and arranged on the basis of customers profitability, which is under the responsibility of each accounts manager. The Table reports highlights of the performance of each manager and any unprofitable relations. It cane also be seen from the Table that the first manager responsible for customers accounts achieved the best level of contribution, the third manager achieved the second place, then the fourth manager and the second one, respectively. The report also identifies the additional or given up expenses for customers. This provides the management with an opportunity to review the effect of this system application on the overall profitability of the bank.

In Table 8 (Appendix), an analysis is made of customers contribution on product and age classification basis. The Table contains customer-related profitability within different age categories. It is obvious that the third age category (36-50 years) is the best one in achieving product contribution. This becomes obvious if we calculate the contribution on one customer average basis. The fourth age category (51-65 years) comes second in contribution.

The Table also shows that the benefit ratio of product is different, depending on age category. It indicates that loans and deposits services are most utilized by categories (3) and (4) of age, and then (1). Category (5) has no utilization of loans. Advisory services, on the other hand, are most utilized by older customers (categories 4 and 5). As for deposit service, it seems that the second category is the most utilized from this facility.

If the sample of customers selected for this study is considered to be as a good representative of the bank customers, marketing activity of the bank should, therefore, be directed to promote services related to loans and deposits for middle age band. At the same time, effort has to be made to improve the profitability of investment and advisory services for high age categories.

Customers contribution calculated on a geographical basis is explained in Table 9 (Appendix), which highlights residence areas that attract more profitable customers to the bank. The report shows that customers living in the North East and South East of Muscat generate more profit than those living in other areas. This may be attributed to the nature of services and products utilized by the customers residing in these areas. It appears from the Table that more profitable customers are willing to use loans and deposits services. Mostly, these services can generate more profit. It is also possible to see, in this sample, that customers residing in the South East and North East are willing to use loan facilities. This may be justified by their need to finance trade activities.

Customers contribution analyzed on job basis is presented in Table 10 (Appendix), which shows the most profitable activities. The Table explains the distribution of the bank products on job basis by showing the net contribution for each product group. The Table also shows that civil officers, farmers, accountants and financial officers are the most beneficiaries of loans facilities. Deposit facility is utilized by most of the categories. As for investment services, artists have the priority to utilize this facility. Owners, on the other hand, use loans and current accounts facilities more than other facilities. Scientists and Academics are prepared to pay fees for advisory service and they, therefore, utilize this service, in addition to deposits and current accounts.

This analysis and the results arrived indicate the possibility to collect detailed and specific information about the bank activities. This information can be used to identify customer-product relations using the (ABC) system and cannot be collected using traditional methods of cost allocation. By contrast, an Activity-Based Costing system employs detailed standards that enable a bank to identify profitable and non- profitable relations.

This identification assists banks to rationalize their relations with customers, which, in turn, will lead to promote efficiency and improve banking profitability. It can be said, therefore, that if the (ABC) system is used for such purposes, it is expected that many constructive results will emerge. This is not meant only for improving profitability, but also for more effective planning and control of activities.

Summary and Conclusion

In banking institutions, the process of measurement and reporting customer/product or service-related profitability is built on the multiple analysis of costs and income balances of the activities performed. This analysis is based on the nature of customers and type of services provided, together with a special emphasis given to strategic marketing and planning processes within the bank.

Currently, reporting information about customer-related profitability is not given due attention and is, in some cases, indicated only by a general paragraph in the last stage of an income statement. Because of the increasing attention given to customer-relations management, profitability related to individual customers and particular groups of customers has become more important and has attracted more efforts. The cost of providing an individual customer or a group of customers with a mix of products or services depends on information related to the product or service cost. However, the calculation of such cost can be developed to reflect directly the cost attributed to a particular customer or a particular group of customers. This will create a more accurate and detailed analysis about the contribution of customer-related profitability for the bank.

In some banking institutions, where the number of customers is very high, the analysis will be costly and it would, therefore, be more practical and appropriate to base the analysis on groups basis classified into indifferent categories.The specification of which groups of customers are most profitable for the bank depends on the nature of banking institutions. However, such specification should facilitate recognition of normal purchase transactions and relevant risk models. In large banking institutions, it is common to analyze information in many ways, for example, on customer-geographical area basis and on product types provided on customer international relations basis. In small banking institutions with small numbers of customers, however, the types of classification may be more specialized and relevant to the types of customers and relations within the geographical area.

In practice, the analysis of customer-related profitability may be built more effectively on Activity-Based Information System. This system is designed to analyze activities on product or service basis. In many banking institutions, it is possible to allocate most of operational expenses on one product or service provided. Some of the costs, however, may arise because the product or the service is specially provided for an individual customer or a particular group of customers. Such costs should be identified and isolated to calculate the profitability related to that particular customer or group, and to set up the suitable standard of allocation.

To calculate customer-related profitability and to analyze its contribution, there should be an ability to measure the extent to which the product is used by the customer, the income and cost involved, and the balances associated with the customers transaction. Product costs can be assumed, in general, to be standardized for a particular range of customers. They can, therefore, be used as a basis to analyze customer-related costs when that customer relates them to the actual usage of product. Customer-related incomes and balances are, however, varied and they should, therefore, be measured independently.

This research has substantiated its hypotheses, that is, Omani banks lack the experience for the implementation of (ABC) system. The results have brought forth useful information created by the (ABC) system, which proves that the application of this system constitutes a good tool for management to reduce cost in many areas and activities and subsequently improve profitability and efficiency.

The comparison with the experience gained from the application of ABC in some other Arab countries would be beneficial and many implications could be reached. This will assist joint effort towards solving common problems, and utilizing and transferring experience gained in one country to others. The analysis conducted in Jordanian banks pointed out many areas in which possible reductions in cost could be achieved, and this has also been found through the analysis of Omani banks activities, where a significant contribution might be made to improve efficiency in them.

However, it is observed that there was a serious attempt in Jordanian banks to explore the areas in which (ABC) can provide assistance to the management to improve the profitability of their activities. Thus a seminar was held in 1997 by the Bank of Jordan in cooperation with some international specialists bodies to discuss the implications of the use of (ABC) technique in Jordanian banks.

As it is the case with any small-scale study, it is difficult to pretend that an answer is available to all questions in this study. It is highly believed that many studies have to be conducted in this area to explore the implications of the use of this technique in Arab financial institutions. This study is merely an attempt to shed light on some of the areas in this direction. Other researchers are encouraged to explore other possible avenues to enrich research about the (ABC) technique and its implications for our national institutions.

Since the model is intended to be as a tool for management, the research has to explain how to use collected information to develop performance standards (measures) for different aspects of banking activities. This can be achieved by sorting out samples of performance measures for each category of managers and their relevant activities. This can assist the management to take the following steps:

(1) Giving customer-accounts managers an opportunity to obtain necessary measures to keep and improve the contribution of customers. This will be useful for current customers, for new customers, and for new products provided to current customers.

(2) It is possible for managers responsible for products or services to obtain measures that relate to size/cost average of activities that are dealt with (production activities) and repeated work. In this regard there may be guided measures to improve efficiency.

(3) It is possible for the managers responsible for assisted activities to obtain standards necessary to measure cost of each unit of the main activities they carry out. They may, also, obtain some guided benchmarks about operations and how they can be developed.

As a result, and after the discussion with the Banks officers, the bank started seriously to review its marketing policy and initiated a sequence of procedures to improve the type of customer-related information and began to concentrate on different large-scale customer services. The bank also started examining the cases that were shown to relate to customers whose relations with the bank were non- profitable and set to define the categories they related to, in order to know the reasons for such relations. In addition, the bank should place more emphasis on profitable relations in order to learn lessons on how to encourage such relations.

References

Al- Jabaly, M. M. 1993. A Study of the use of Activity Based Costs to Meet the Application of Developing Computer Systems in the Developed Technological Enterprises. *Journal of Business Researches and Studies*, Commerce College, Benha University. 2:61.

Al-Shammari, M. and Salim, A. 1998. Modeling the operating Efficiency of Banks: A Nonparametric Methodology. *Logistics Information Management*, MCB University, 11(1):5-17.

Annual Statistical Report. 2002. Ministry of National Economy, *Banking and Muscat Securities Market* August, Section (16).

Association of Chartered Certified Accountants (ACCA). 2003. Financial Management and Control, BPP. U.K. Paper 2.4, August,

Blocher, E. J., Hung, C. H., and Thomas, L. W. 2002. *Cost Management A Strategic Emphasis*, McGraw-Hill-Irwin, pp. 98-134.

Briers, M. Lukett, Peter and Chow, C. 1997. Data Fixation and the Use of Traditional Versus Activity- Based Costing Systems, *ABACUS* 33(1): 49-52.

Central Bank of Oman-CBO. 2000-2001. *Al-Markazy Magazine,* Special Issue.

Coelli, T. and George, B. E. 1998. *An Introduction To Efficiency And Productivity Analysis*, Kluwer Academic Publishers, USA.

Cokins, G. 1999. Learning to Love ABC: Why CPAs Stumble on Activity-Based Costing Projects, *Journal of Accountancy*, (AUgust): 37-40.

Cooper, R. and Regin, S. 1999. Strategic Cost Management. *Management Accounting*, (January): 16-17.

Cooper, R. 1991. ABC: The Right Approach For You, *Accounting*, January: 71-72.

David, C. 1997. The Case for a New Model of Financial Performance. *Bank Accounting and Finance*, Fall. 21-28.

Drury, C. 2000. *Management & Cost Accounting*, 5th ed., Business Press, Thomson Learning, USA. 342-345.

Garison, R., Norein, H. E., Chesley, G.R. and Ramond, C. F. 1999. *Managerial Accounting -Concepts for Planning, control, Decision Making*, McGraw -Hill Ryerson, New York.

Gering, M.1999. Activity Based Costing-Lessons Learned - implementing ABC, *Management Accounting*, (May): 26-27.

Gosselin, M. 1997. The Effect of Strategy and Organizational Structure on the Adoption and Implementation of Activity-Based Costing, *Accounting Organization and Society,* 22(2): 105-109.

Horngren, T. George, F. and Srikant, D. M. 2000. *Cost Accounting: A Managerial Emphasis* 10th edi., Englewood, Cliffs, Prentice Hall, Inc. 140 -553.

Horngren, C. T., Gary, S., L. and William, S. O. 1999. *Introduction to Management Accounting*, Prentice Hall International, Inc, 11th ed. U.K.

Jeans, M. and Michael, M. 1989. The Practicalities of Using Acting Activity- Based Costing, *Management Accounting* London. (November): 42-44.

Johnson, H. T. 1988. Activity - Based Information: A Blueprint For World-Class Management Accounting, *Management Accounting*, (June): 23-30.

Kaplan, R. 1992. In Defense of Activity - Based Cost Management, *Management Accounting*. U.S. (November): 58-62.

Kaplan, R. S. Son, A. and Anthony A. 1988. *Advanced Management Accounting*. 3rd ed. Prentice Hall International, Inc. 112.

Kerremans, M. Theunisse, H. and Van, O. G. 1991. Impact of Automation on Cost Accounting, *Accounting and Business Research*, 21(82): 146-155.

Lewis, R. J. 1991. Activity - Based Costing for Marketing, *Management Accounting*, (November): 33-38.

Mays, J. W. and Robert, S. B. 1994. Activity - Based Costing in Banking A Case Study, *CMA Management,* (May): 19-23.

Mohammad, M. S. 2002. The Implications of the Use of (ABC) for Cost Reduction in Insurance Companies: An Empirical Study in One Jordanian Insurance Company, *The International Journal for Administrative Sciences* - The International Institution of Administrative Sciences, Abu Dhabi -UAE, 7(3): 201-243

Mohammad, M. S. 2003. Using (ABC) System to Improve the Profitability in Jordanian Banks: An Empirical Study, *Al-Edary Journal, Sultanate of Oman* 95(Dec.): 39-88.

Morse D. C. and Jerald, Z. L. 1997. *Managerial Accounting*, Irwin-McGraw Hill, New York, 111-113.

Ostrenga, M. R. 1990. Activities: The Focal Point of Total Cost Management, *Management Accounting*, (February): 42-44.

Raffish, N. 1991. How Much Does That Product Really Cost? *Management Accounting*, (March): 36-39.

Ronald R. 1997. Banking on the Relationship, *Bank Marketing*, (June): 52- 55.

Shank k. J. Vijay, G. and Dartmouth, C. 1992. Strategic Cost Management: The Value Chain Perspective, *Journal of Management Research*, (JMAR). Vol. Four. Fall: 179-197.

Vaassan, E. H. J. 2002. *Accounting Information Systems - A Managerial Approach*, John Wiley & Sons LTD, England.

Yousif, A. M. 1998. Accounting Measurement to Transfer Activity Analysis for Budget Preparation as a Means for Costs Control- Empirical Simulation, Scientific *Journal of the Administrative and Economic College* Qatar University. Qatar (9): 281-328.

Appendix

Table 1

Banks Licensed to Operate in the Sultanate End of 2001

Name of the Bank	Year of Establishment Offices Authorized Offices Operating			Branches	
				Operating In Muscat	Outside Muscat
1- Commercial banks:					
A- Local banks:					
1-National bank of Oman	1973	52	49	16	33
2- Oman Arab bank	1973	32	30	12	18
3- Oman International bank	1975	83	82	19	63
4- Bank Muscat	1981	92	87	31	56
5- Bank Dhofar Al Omani Al Fransi	1990	43	43	16	27
6- Majan international Bank	1998	6	6	4	2
B- Foreign banks:					
1- HSBC Bank	1948	7	7	4	3
2-Standard Chartered bank	1968	1	1	1	0
3-Habib bank limited	1972	11	11	6	5
4-Bank Melli Iran	1974	1	1	1	0
5-City bank N.A.	1975	1	1	1	0
6-Bank of Baroda	1976	3	3	2	1
7- Bank Saderat Iran	1976	1	1	1	0
8-National bank of Abu Dhabi	1976	1	1	1	0
9- Banque Banorabe	1989	1	1	1	0
2-Specialized banks:					
1-Oman Housing Bank	1977	9	9	1	8
2-Oman development Bank	1997	10	10	1	9
3-Alliance Housing Bank	1997	7	7	2	5
4-Industrial bank of Oman	1998	1	1	1	0
Total 19 Banks		362	351	121	230

Table 2
Summary table of the Oman Banks Activities

Item	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991
No. of Licensed banks:	19	20	20	20	19	21	21	21	22	24	25
No. of banks Branches:	351	358	346	337	326	313	299	278	271	268	269
Currency outside commercial Banks(O.R.)	275.9	276.8	273.5	244.3	242.2	231.2	235.9	245.6	232.9	226.7	215.9
Demand deposits (O.R.):	418.8	257.1	236.0	258.5	296.8	271.1	233.1	225.3	217.2	204.9	187.3
Money Supply (O.R.):	694.7	534.0	509.5	502.8	539.0	502.3	469.0	470.9	450.1	431.6	403.2
Quasi Money (O.R.):	1930.8	1870.1	1758.5	1628.5	1495.2	1131.5	1042.9	933.2	865.4	842.5	832.7
Domestic Liquidity (O.R.):	2625.5	2404.0	2267.5	2131.3	2034.2	1633.8	1511.9	1404.1	1315.5	1274.1	1235.9
Bank Lending (O.R.):	3241	2981	2899	2630	2242	1664	1407	1261	1135	1073	974
Central bank Total assets/ Liabilities (O.R):	1114	1054	1233	1024	950	921	912	838	831	1016	1079
Loans Approved by Housing Bank (000 R.O):	27219	21026	3064	26289	25997	24170	20169	19133	18406	17229	16287
Loans Approved by Oman Development Bank (000 R.O):	4172	8328	6556	6154	1875	31317	19908	16663	18117	12099	12703

Table 3
Data Base For Analysis (International Bank)

Customer		Accounts Officer		Customers relations		Age
Name	No.	Name	No.	Job	Geographical Area	
Salim	615	Hamad	14	16	NE	5
Naser	218	Hamad	14	11	SW	2
Ali	399	Hamad	14	13	SE	1
Mohamad	430	Hamad	14	12	NW	4
Naeema	918	Hamad	14	8	SE	2
Nofa	1021	Hamad	14	12	NE	3
Abdulla	116	Hamad	14	13	SW	1
Mutasim	524	Huda	9	11	NE	4
Fethy	1099	Huda	9	6	SW	2
Ahmad	480	Huda	9	16	SW	1
Abeer	812	Huda	9	12	NE	3
Suad	876	Huda	9	7	SW	2
Layla	721	Huda	9	13	NW	2
Mosa	768	Huda	9	10	SW	3
Khamis	919	Salim	11	12	NE	1
Kareem	1222	Salim	11	7	SE	3
Sadik	158	Salim	11	6	NW	3
Amjad	278	Salim	11	8	NE	4
Sabeeh	242	Salim	11	7	SE	4
Nadra	656	Salim	11	10	SE	5
Salih	998	Salim	11	16	NW	5
Husain	1121	Khalifa	15	6	NW	5
Ameer	1433	Khalifa	15	8	SE	4
Khalid	623	Khalifa	15	14	NW	1
Sami	1024	Khalifa	15	10	NW	1
Husam	955	Khalifa	15	14	SE	5
Sara	323	Khalifa	15	11	NE	4
Rathy	614	Khalifa	15	14	SW	5

Table 4
Customer- Product Related Costs

Costs Details	Loans	Deposits	Current Accounts	Invest-ment Ac-counts	Financial Invest-ment	Deposits Keeping	Total Costs
Operational Activity:	1233	200	8229	13600	1400	286	24948
Premises Activities:	420	75	3981	4623	404	92	9595
Information Tech. Costs:	616	136	5422	3988	390	78	10630
Marketing Costs:	294	56	------	1704	------	-----	2054
Total Product Costs	**2563**	**467**	**17632**	**23915**	**2194**	**456**	**47227**
Customers Specific Costs (Approx. 25 % of Product Costs:							11916
Total Operational Costs:							59143
Assistance Costs 35 % of Total Operational Costs:							20700
Total Cost of the Sample							**79843**

Table 5

Income From The Customers - Related product (International Bank)

Customer		Income From Interest			Interest expenses			Income from services fees				
Name	No.	Loans	Deposits	Current Accounts	Loans	Deposits	Current Accounts	Loans	Current Accounts	Interest fees	Advisory Accounts	Deposits custody
Husam	955	12500	(735)	108	0	189	(84)	0	99	150	0	0
Samy	1024	49497	0	(15)	0	0	52	750	0	2805	378	0
Rathy	614	0	0	0	0	0	0	0	0	7500	990	0
Sara	323	19465	0	(570)	0	0	1890	750	0	0	0	0
Khalid	623	0	0	0	0	0	0	0	0	1890	818	46
Salih	998	0	0	(4425)	0	0	6195	0	0	900	472	0
Sabeeh	242	0	0	(1860)	0	0	3255	0	0	0	870	32
Husain	1121	0	(750)	(57)	0	1050	200	0	0	0	378	0
Amjad	278	8662	(13140)	(39)	(5820)	19290	136	750	0	0	189	63
Sadik	158	8640	0	4050	(4300)	0	(3150)	0	45	0	0	0
Nadra	656	22770	0	1809	(19320)	0	(1407)	750	122	0	738	0
Amir	1433	22500	0	(3825)	(16800)	0	3262	750	0	2850	0	114
Kareem	1222	0	0	(6)	0	32130	21	0	0	0	0	30
Abeer	812	20295	0	(1440)	(17220)	0	2520	750	0	0	0	82
Layla	721	67950	0	216	(8085)	0	(168)	750	180	0	0	0
Saud	876	15600	(1500)	378	(11400)	2100	1323	0	0	0	0	0
Khamis	919	15495	(750)	14	(13020)	1050	(11)	750	11	0	189	0
Fethy	1099	0	(750)	0	0	1050	0	0	0	2610	0	0
Mohd	430	22275	0	(3)	(18900)	6080	10	750	0	316	0	0
Ahmed	480	0	2500	0	0	0	0	0	0	2250	248	0
Naeema	918	46050	(17250)	338	(6405)	21000	(262)	750	158	2250	0	0
Ali	399	23750	0	0	0	0	0	0	0	2250	0	0
Salim	615	0	0	810	0	0	(630)	0	99	0	850	0
Nofa	1021	7524	8910	(315)	(6384)	31500	735	750	0	0	297	0
Mosa	768	7672	0	4050	(6510)	0	(3150)	750	35	0	0	158
Abdulah	116	0	0	(45)	0	0	158	0	0	0	567	0
Naser	218	0	(17250)	324	0	21000	(252)	0	87	0	0	92
Mutasim	524	0	0	(567)	0	0	1323	0	0	6750	0	0

Table 6
Calculation of Profitability Related to Customers and Products

Customer		Accounts officer	Net Contribution of the Customers direct and Assistant Costs						Total of Product Contribution	Customers Specific Costs	Operational Contribution
Name	No.		Loans	Deposits	Current Accounts	Investment Accounts	Advisory Accounts	Deposit Custody			
Samy	1024	Kalifa	6345	0	(345)	720	135	0	6855	825	6030
Mutesim	524	Huda	0	0	445	3720	0	0	4165	0	4165
Sara	323	Kalifa	3279	0	518	0	0	0	3797	0	3797
Nofa	1021	Hamad	3226	3328	(42)	0	80	0	6592	585	6007
Amir	1433	Kalifa	4689	0	782	1300	0	12	6783	3475	3308
Nadra	656	Salim	2523	0	(309)	0	223	0	2437	0	2437
Naeema	918	Hamad	3223	3704	(960)	344	0	0	6311	600	5711
Amjad	278	Salim	3966	2286	(800)	0	111	7	5570	697	4873
Nasir	218	Hamad	0	3704	(450)	0	0	14	3268	0	3268
Abeer	812	Huda	3615	0	3	450	0	8	4076	1378	2698
Sadik	158	Salim	3778	0	(693)	0	0	0	3085	0	3085
Mosa	768	Huda	3895	0	(1072)	0	0	18	2841	321	2520
Kareem	1222	Salim	0	3896	(777)	0	355	9	3483	922	2561
Mohd	430	Hamad	1744	0	235	0	111	0	2090	0	2090
Khamis	919	Salim	2907	253	(585)	0	111	0	2686	1347	1339
Fethy	1099	Huda	0	254	0	(631)	0	0	(377)	0	(377)
Ali	399	Hamad	2850	0	0	320	0	0	3170	771	2399
Khalid	623	Kalifa	0	0	0	(571)	279	8	284	0	284
Salih	998	Salim	0	0	766	0	502	0	1268	172	1096
Salim	615	Hamad	0	0	(300)	(5)	159	0	(146)	0	(146)
Ahmad	480	Huda	0	472	0	0	335	0	807	150	657
Suad	876	Huda	1755	696	(603)	0	0	0	1848	187	1661
Sabeeh	242	Salim	0	0	207	0	334	3	544	102	442
Abdulah	116	Hamad	0	0	(402)	0	223	0	(179)	0	(179)

continued

cont. Table 6

Calculation of Profitability Related to Customers and Products

Customer		Accounts officer	Net Contribution of the Customers direct and Assistant Costs						Total of Product Contribution	Customers Specific Costs	Operational Contribution
Name	No.		Loans	Deposits	Current Accounts	Investment Accounts	Advisory Accounts	Deposit Custody			
Husain	1121	Kalifa	0	254	(808)	0	390	0	(164)	0	(164)
Layla	721	Huda	1974	0	(1336)	(846)	0	0	(208)	270	(478)
Rathy	614	Kalifa	0	0	0	(1325)	561	0	(764)	0	(764)
Husam	955	Kalifa	1500	322	(440)	(445)	0	0	937	114	823
Total contribution of operations:									71059	11916	59143
(-) Indirect Cost allocated by 35 % of Operations Costs:											(20700)
Total profit before tax:											38443

Table 7
Customers Contribution Calculated on Accounts Officer Basis

Account Officer	Customer		Product Contribution Analyzed on Customer Basis	Customers Specific Costs		Total Operational Contribution	
Name	No.			Fees given up by Direct	the bank Costs		
Hamad	Salim	615	(146)	0	0	(146)	
	Nasir	218	3268	0	0	3268	
	Ali	399	3170	621	150	2399	
	Mohd	430	2090	0	0	2090	
	Naeema	918	6311	600	0	5711	
	Nofa	1021	6592	302	283	6007	
	Abdullah	116	(179)	0	0	(179)	19150
Huda	Mutasim	524	4165	0	0	4165	
	Fathy	1099	(377)	0	0	(377)	
	Ahmad	480	807	150	0	657	
	Abeer	812	4076	900	478	2698	
	Suad	876	1848	187	0	1661	
	Layla	721	(208)	270	0	(478)	
	Mosa	768	2841	0	321	2520	10846
Salim	Khamis	919	2686	1058	289	1339	
	Karim	1222	3483	720	202	2561	
	Sadik	158	3085	0	0	3085	
	Amjad	278	5570	447	250	4873	
	Sabeeh	242	544	0	102	442	
	Nadra	656	2437	0	0	2437	
	Salih	998	1268	172	0	1096	15833
Khalifa	Hussain	1121	(164)	0	0	(164)	
	Amir	1433	6783	2814	661	3308	
	Khalid	623	284	0	0	284	
	Samy	1024	6855	657	168	6030	
	Husam	955	937	0	114	823	
	Sara	323	3797	0	0	3797	
	Rathy	614	(764)	0	0	(674)	13314
Total Contribution			71059	8898 +	3018	59143	59143
(-) Indirect Costs Allocated by 35 % of Total Contribution				11916			
Profit Before tax							

Table 8
Customers Contribution Analyzed on Age Category Basis

Customer		Age Category	Net Contribution of the Customers direct and Assistant Costs						Total of Product Contribution	Customers Specific Costs	Operational Contribution
Name	No.		Loans	Deposits	Current Accounts	Investment Accounts	Advisory Accounts	Deposit Custody			
Samy	1024	1	6345	0	(345)	720	135	0	6855	825	6030
Khamis	919	1	2907	253	(585)	0	111	0	2686	1347	1339
Ali	399	1	2850	0	0	320	0	0	3170	771	2399
Ahmad	480	1	0	472	0	0	335	0	807	150	657
Abdulah	116	1	0	0	(402)	0	223	0	(179)	0	(179)
Khalid	623	1	0	0	0	(571)	279	8	284	0	284
Layla	721	2	1974	0	(1336)	(846)	0	0	(208)	270	(478)
Naeema	918	2	3223	3704	(960)	344	0	0	6311	600	5711
Suad	876	2	1755	696	(603)	0	0	0	1848	187	1661
Nasir	218	2	0	3704	(450)	0	0	14	3268	0	3268
Fethy	1099	2	0	254	0	(631)	0	0	(377)	0	(377)
Kerim	1222	3	0	3896	(777)	0	355	9	3483	922	2561
Nofa	1021	3	3226	3328	(42)	0	80	0	6592	585	6007
Abeer	812	3	3615	0	3	450	0	8	4076	1378	2698
Sadik	158	3	3778	0	(693)	0	0	0	3085	0	3085
Mosa	768	3	3895	0	(1072)	0	0	18	2841	321	2520
Mutesim	524	4	0	0	445	3720	0	0	4165	0	4165
Sabeeh	242	4	0	0	207	0	334	3	544	102	442
Sara	323	4	3279	0	518	0	0	0	3797	0	3797
Amir	1433	4	4689	0	782	1300	0	12	6783	3475	3308
Amjad	278	4	3966	2286	(800)	0	111	7	5570	697	4873
Mohd	430	4	1744	0	235	0	111	0	2090	0	2090
Salim	615	5	0	0	(300)	(5)	159	0	(146)	0	(146)
Nadra	656	5	2523	0	(309)	0	223	0	2437	0	2437
Salih	998	5	0	0	766	0	502	0	1268	172	1096
Rathy	614	5	0	0	0	(1325)	561	0	(764)	0	(764)
Husain	1121	5	0	254	(808)	0	390	0	(164)	0	(164)
Husam	955	5	1500	322	(440)	(445)	0	0	937	114	823

Note: Category (1)- (5-20 years), (2)-(21-35 years), (3)- (36-50 years), (4)- (51-65 years), (5)- (66- and more).

Table 9
Customers Contribution Analyzed on Geographical Area Basis

Customer		Area	Net Contribution of the Customers direct and Assistant Costs						Total of Product Contribution	Customers Specific Costs	Operational Contribution
Name	No.		Loans	Deposits	Current Accounts	Investment Accounts	Advisory Accounts	Deposit Custody			
Samy	1024	NW	6345	0	(345)	720	135	0	6855	825	6030
Layla	721	NW	1974	0	(1336)	(846)	0	0	(208)	270	(478)
Sadik	158	NW	3778	0	(693)	0	0	0	3085	0	3085
Mohd	430	NW	1744	0	235	0	111	0	2090	0	2090
Husain	1121	NW	0	254	(808)	0	390	0	(164)	0	(164)
Salih	998	NW	0	0	766	0	502	0	1268	172	1096
Khalid	623	NW	0	0	0	(571)	279	8	284	0	284
Amir	1433	SE	4689	0	782	1300	0	12	6783	3475	3308
Nadra	656	SE	2523	0	(309)	0	223	0	2437	0	2437
Naeema	918	SE	3223	3704	(960)	344	0	0	6311	600	5711
Ali	399	SE	2850	0	0	320	0	0	3170	771	2399
Husam	955	SE	1500	322	(440)	(445)	0	0	937	114	823
Sabeeh	242	SE	0	0	207	0	334	3	544	102	442
Kareem	1222	SE	0	3869	(777)	0	355	9	3483	922	2561
Sara	323	NE	3279	0	518	0	0	0	3797	0	3797
Nofa	1021	NE	3226	3328	(42)	0	80	0	6592	585	6007
Amjad	278	NE	3966	2286	(800)	0	111	7	5570	697	4873
Abeer	812	NE	3615	0	3	450	0	8	4076	1378	2698
Khamis	919	NE	2907	253	(585)	0	111	0	2686	1347	1339
Salim	615	NE	0	0	(300)	(5)	159	0	(146)	0	(146)
Mutesim	524	NE	0	0	445	3720	0	0	4165	0	4165
Abdulah	116	SW	0	0	(402)	0	223	0	(179)	0	(179)
Rathy	614	SW	0	0	0	(1325)	561	0	(764)	0	(764)
Nasir	218	SW	0	3704	(450)	0	0	14	3268	0	3268
Mosa	768	SW	3895	0	(1072)	0	0	18	2841	321	2520
Suad	876	SW	1755	696	(603)	0	0	0	1848	187	1661
Ahmad	480	SW	0	472	0	0	335	0	807	150	657
Fethy	1099	SW	0	254	0	(631)	0	0	(377)	0	(377)

Note: (NW) North West, (SE) South East, (NE) North East, (SW) South West.

Table 10
Customers Contribution Analyzed on Job Basis

Customer		Job	Net Contribution of the Customers direct and Assistant Costs						Total of Product Contribution	Customers Specific Costs	Operational Contribution
Name	No.		Loans	Deposits	Current Accounts	Investment Accounts	Advisory Accounts	Deposit Custody			
Fethy	1099	6	0	254	0	(631)	0	0	(377)	0	(377)
Sadik	158	6	3778	0	(693)	0	0	0	3085	0	3085
Husain	1121	6	0	254	(808)	0	390	0	(164)	0	(164)
Sabeeh	242	7	0	0	207	0	334	3	544	102	442
Kareem	1222	7	0	3869	(777)	0	355	9	3483	922	2561
Suad	876	7	1755	696	(603)	0	0	0	1848	187	1661
Naeema	918	8	3223	3704	(960)	344	0	0	6311	600	5711
Amjad	278	8	3966	2286	(800)	0	111	7	5570	697	4873
Ameer	1433	8	4689	0	782	1300	0	12	6783	3475	3308
Mosa	768	10	3895	0	(1072)	0	0	18	2841	321	2520
Nadra	656	10	2523	0	(309)	0	223	0	2437	0	2437
Sami	1024	10	6345	0	(345)	720	135	0	6855	825	6030
Naser	218	11	0	3704	(450)	0	0	14	3268	0	3268
Mutasim	524	11	0	0	445	3720	0	0	4165	0	4165
Sara	323	11	3279	0	518	0	0	0	3797	0	3797
Abeer	812	12	3615	0	3	450	0	8	4076	1378	2698
Nofa	1021	12	3226	3328	(42)	0	80	0	6592	585	6007
Khamis	919	12	2907	253	(585)	0	111	0	2686	1347	1339
Mohamad	430	12	1744	0	235	0	111	0	2090	0	2090
Abdulla	116	13	0	0	(402)	0	223	0	(179)	0	(179)
Ali	399	13	2850	0	0	320	0	0	3170	771	2399
Layla	721	13	1974	0	(1336)	(846)	0	0	(208)	270	(478)
Khalid	623	14	0	0	0	(571)	279	8	284	0	284
Husam	955	14	1500	322	(440)	(445)	0	0	937	114	823
Rathy	614	14	0	0	0	(1325)	561	0	(764)	0	(764)
Salim	615	16	0	0	(300)	(5)	159	0	(146)	0	(146)
Ahmad	480	16	0	472	0	0	335	0	807	150	657
Salih	998	16	0	0	766	0	502	0	1268	172	1096

Note: No. (6) refers to Academics, (7) Civil Service Officers, (8) Owners, (16) Medical Doctors, (11) Lawyers, (12) Accountants & Financial Positions, (13) Managers, (14) Artists, (10) Farmers & Agriculture Jobs.

Appendix
Figure (1)
A QUESTIONNAIRE FORM

FIRST: Personal Information:

Put sign (X) in the Appropriate Place of the following Cases:

First (A): Scientific Qualification:

Secondary School	Diploma	Bachelor	Master	PH. D

(B) Specialization:

Accounting	Business Admin.	Financial & Banking	Economic	Other

(C) Period of Experience (Years):

1-5	6-10	11-15	15-20	More than 20

Second: The Extent to which ABC Technique is used Either Partly or Comprehensively:

Have you ever implemented (ABC) System in your Banking Practices?

Yes	To Some Extent	No

Third: The Factors Affecting the Implementation of ABC:

What are the Priorities of the Following Factors in Effecting The Application of (ABC) in Your Banking Institution?.

The Factors Influencing
The Implementation of (ABC) System

Sr.	Questions	Very Strong		Strong		Average		weak		Weak Very	
		Fr.	%	Fr.	%	Fr.	%	Fr.	%	Fr.	%
1	Absence of Detailed and Comprehensive Organizational Structure of activities										
2	Absence of Sufficient Information About (ABC) System.										
3	Absence of benchmarking Application of the System.										
4	Absence of skilled and qualified personnel.										
5	Absence of Management will to Apply the System										
6	Absence of the necessary Equipment and Technology.										
7	There is no need for a new System because of the ability of current System to do the work.										
8	The Cost of the implementation of the New System is high in Comparison with its Benefits.										

الملخص

تحسين الأداء في المصارف العمانية باستخدام نظام تخصيص التكاليف على أساس الأنشطة

منير شاكر محمد
الكلية التقنية العليا – سلطنة عُمان

يهدف هذا البحث إلى اختبار مضامين استخدام نظام تخصيص التكاليف على أساس الأنشطة في قطاع المصارف العمانية. وقد اختير أحد المصارف لهذا الغرض، لإجراء الدراسة الميدانية. ويفترض البحث وجود علاقة إيجابية بين استخدام النظام وربحية المصرف، ومن ثم كفاءته في الأداء. وقد دلت نتائج البحث على أن تطبيق النظام في المصارف المذكورة يؤدي إلى تحقيق تخفيضات ملموسة في تكلفة كثير من الأنشطة. وقد تم تحديد تلك الأنشطة وسبل تخفيض التكلفة فيها. كما حدد البحث الأنشطة التي تسهم بفاعلية في ربحية المصرف، ومن ثم إمكانية توجيه نصيب أوفر من الاستثمار فيها بهدف تطويرها وتعزيز إسهامها في الربحية ورفع كفاءة المصرف. وقد أشار البحث إلى بعض الدراسات المقارنة في هذا المجال وخاصة تلك التي أجريت على القطاع المصرفي في الأردن، وأجرى مقارنة بين طبيعة المشكلات التي يواجهها تطبيق النظام في كلا البلدين، كما خلص إلى توصيات محددة بهدف الاستفادة من تطبيقات النظام ومزاياه.

Muner S. Mohamad, Associate Professor, (Ph.D in Accounting, Al- Mustansireya University-Baghdad, M.phil in Accounting and Finance- Hull University- U.K), Head of Business Studies Department, Higher College of Technology, Muscat- Oman, Prior to this he was a Faculty Member- The Administrative & Financial Sciences College -Al ISra University- Jordan, His Research Interest in the Area of Cost Accounting Systems, Performance Evaluation and Auditing.