Improving Costing Methodology Based on Commercial Bank Restructuring

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ABSTRACT

Although many factors affect the bank’s cost structure, the most important one is the indirect cost weight compared with the cost object. However, it is made clear that the banks cannot appropriately allocate their indirect costs to the cost of products and services, control those costs, and use the output for decision making as a result of a survey conducted for this paper. Therefore, this paper is to explore how to improve costing methodology based on commercial bank restructuring since traditional costing system is defined as the suitable method to solve this issue. The study will provide managers and policy makers with strategic insights and an important method to in commercial bank or similar settings.

Keywords: Commercial bank cost structure, traditional and activity based costing system
INTRODUCTION

In the recent years, there has been a decreasing tendency in the commercial banks’ profitability. On one hand, this is due to the strong competition in the industry and increase in the operating costs. However, it is limited to increase their revenues by changing fees and commissions. Many factors affect the bank’s cost structure, the most important one is the indirect cost weight compared with the cost object. These are urging the banks to control their costs in order to stabilize the profitability and firm performance (Bacon and McMillan, 2007; Lee & Lee, 2014).

This study is aimed to determine how the banks should control their costs using which costing method, and how they should implement it. It is made clear that the banks cannot appropriately allocate their indirect costs to the cost of products and services, control those costs, and use the output for decision making as a result of a survey conducted in this study.

LITERATUR REVIEW

Modern trends of cost management

Managerial accounting is the process of identifying, measuring, cumulating, analyzing information for the pursuit of forecasting, valuing, and controlling entity’s operation. In addition to the process, it is a procedure that create documents and reports by consolidating and analyzing a data from business operations. Management uses this information for decision-making, and it affects the organization’s strategy. Furthermore, management can control their cost by implementing their basic functions of forecasting, motivating, organizing, monitoring, and decision-making (Bakieva & Khashimova, 2017; Rossouw, 2016). Cost management is the process of controlling and planning the budget
of any activity. It aims to supply users with the highest quality products and services at the lowest cost. In order to achieve the goal, the following objectives must be met:

- Determining the costs of the resources required,
- Reducing the costs of the operations that are not adding value,
- Determining efficiency and effectiveness of the operation,
- Determining the operation of measuring performance, permanent improvement, and introducing and implementing new ideas.

Recently, management is continuously developing itself and implementing an innovative cost management method by improving the product’s quality, performance, and lowering its cost. These management methods and initiatives are dependent on each other, and capable to support another. According to Tom Albright and Marco Lam (2006), these methods can be broadly classified into three groups: managing production flow, focusing on strategic management, and reducing process variation.

Source: CAM-I (Gary, 1999)

Figure 1 Information sources of cost
These methods are all connected and consolidated to each other by focusing on permanent and continuous improvement of its business operation. In addition, it seeks to monitor the cost, improve the quality, reduce the cost, and determine the true activity and process. Thus, the main elements of these methods are the activity and process, and these are the basic variables of the activity based costing management. Entity should analyze its activity, cost driver, and performance, and implementing activity based management, in order to continuously improving the entity’s value.

**Costing methods**

Costing methods are classified in to three groups by how it is allocating the indirect cost. Which are:

- Production level – Only one incremental cost driver is used for allocating indirect cost, and typically direct labor is used in this level.
- Unit level – Cost drivers, that are suitable for segment’s characteristics, are used for allocating incremental indirect cost. In this level, cost drivers are machine time, labor hours, and direct material cost. This level is more suitable method for commercial bank.
- Activity and operational level – Indirect costs are allocated by using activity, operation, process cost driver, and the cost drivers are allocated to the final products.

Organization can obtain accurate information about the product and service cost and implementing efficient cost management by choosing efficient cost accounting and costing methods.
In banking industry, traditional and activity based costing methods are used to estimate product cost by using cost drivers to allocate indirect costs into cost object, which is a product. Thus, commercial banks can choose most suitable costing methods among these two.

**Figure 2. Costing system**

**Traditional costing system**

The process of allocating non-financial costs into different cost objects begins with deciding on which costs must be allocated to cost objects. This method can be classified into two types of approaches which are the partial and full costing system. The partial costing system allocates only a part of the cost, and the full costing systems allocates all the costs. In any of these alternative systems, the cost allocation process is usually a sequential process that consists of two stages. In the first stage, the different cost categories are added to the different intermediate cost objects, and in the second stage, costs are allocated to the final cost objects. Thus, coming back to the classification of transformation costs of banking institutions which differentiated between direct and
indirect costs, it is worth considering the use of partial or full cost systems in banking institutions.

Managerial accounting in commercial banking institutions was introduced relatively later in comparison with other institutions in other sectors. This is the one of reasons of limited development in managerial accounting. For example, competition in the banking sector situation until the 1980s were not yet serve as an incentive for development of managerial accounting and management planning and control system. On the other hand, banking sectors’ main function is considerably differing from other sector, because its function is heavily depended on domestic conditions and performance of companies. Such a transition would hinder the development of the financial sector and industry. In addition, this system explains why the financial institutions initiated full costing system relatively later in comparison with other sector (Carenys & Sales, 2008, p. 38), and bank needs profit analysis rather than absorbing costs (Mecimore & Cornick, 1982).

Source: (Carenys & Sales, 2008)

Figure 3. Traditional costing system
Similarly, a study, that covered banks of USA, criticized that instead of giving much attention on full cost, bank management gave full attention on cost management and direct costs. However, if the indirect cost increases, direct costing system will become insignificant in functions of planning and monitoring. Thus, this system’s potential is limited for the companies (high indirect fixed cost) that have higher indirect cost level and many products. Finally, according to Carenys and Sales, using this system is not appropriate for the financial institutions (Carenys & Sales, 2008).

**Activity-based costing system (ABC)**

Increasing necessity for proper allocation of cost and narrowing production operation has created activity-based costing (ABC) system. During the 1980s, increasing overhead costs was main problem that institutions’ production process has faced. There was no adequate method to manage increasing overhead costs more efficiently. Activity-based costing made a fundamental change in the accounting of overhead costs. In Germany, this method has developed under the name of “operating expense accounting” from 1989. In 1990, in US, Hewlett-Packard, John Deere, Siemens, GM, and other major companies started to focus more on measuring the cost and successfully developed. Japanese manufacturers have been widely used it for controlling cost, discount, restructuring land of production, and create a healthy environment for business.

Since 1980s, researches had been conducted on introducing the ABC system into banking and financial sector. In 1988 Gadner and Lummers (Gadner M & Lammers L, 1988, p. 38) carried out a survey on commercial banks and credit and saving associations of USA in order to indicate current condition of the financial accounting and management control level. The survey result indicated that the intentional distribution of indirect
transformation cost to the product, service, and customers is important to make decisions by the management. In 1997, Innes and Mitchel (Innes, Mitchell, & Sinclair, 2000, p. 360) carried out a survey on 31 biggest banks and financial institutions. The survey result indicated that the ABC system is significant for improving the accounting operation of management of bank and financial institutions.

In 2006, Carenys and Sales (Carenys & Sales, 2008) made survey on 26 savings bank of Spain and 40 commercial banks of USA, and reached the following conclusion as a result:

- It is appropriate to distribute the total costs to the product, service, and customers, not limiting with only direct costs
- Information on indirect transformation costs is significantly important for decisions of administration

Source: (Jan et al., 1994)

Figure 4. Activity-based costing system
ABC system was applied in monitoring and reducing the costs at that time and the common application of this system is seriously beneficial (Bert & Esther, 1994). Traditional and activity-based costing systems are not only differed by its allocating base, it also differs by the second stage cost allocation depending on the number of allocating base that are used. Typically, traditional costing system uses labor hours, machine time, and material (in amount) as allocating base, whereas activity-based costing system uses variety of allocation bases which can be repair time, order number, and number of issues resolved, etc. Thus, the activity-based costing system provides more reliable and accurate product cost than traditional costing system (Innes et al., 2000), (Kaplan, 1988), (Fawzi, A, 2008).

![Diagram of TCS system and ABC system](image)

Source: Kaplan et al (1992)

Figure 5 Comparisons of costing systems

Even though commercial banks are measuring cost of branch, sub-branches, and product, the activity-based costing system on same level compromises the accuracy of the cost information. It is
necessary for accurate allocation of indirect costs into product or services because of increasing indirect cost due to increasing marketing cost, new technology, and usage of technology.

**CURRENT CONDITION OF MEASURING PRODUCT AND SERVICE COST OF COMMERCIAL BANK**

In commercial banking industry, increasing competition, developments in technology, changes in interest rate, and growth of financial market led to increase the cost of reserves and reduces profit. In addition, growth in industry operation and increasing numbers of customers have led increase in operating cost.

**Current Situation of Financial and Managerial Accounting System of Mongolian Commercial Banks**

**Commercial bank’s financial and managerial accounting system:**

The survey was taken from 47 bank officers, who works in financial accounting, managerial account, and financial planning department, from 13 different banks by face-to-face with an in-person interview and questionnaire. The purpose of this survey was to evaluate commercial banks’ current cost accounting and costing system and to determine current product costing system.

According to the survey result, current commercial bank’s accounting operations are divided into 3 different types of structures (see Table 1).

Financial and accounting activities of commercial banks that operating in Mongolia have concentrated considerably on department of finance. Typically, the main functions of the department of finance are financial budgeting, planning, developing accounting policies and procedures, conducting
financial analysis, and providing financial reports to internal and external users.

Table 1. Banks’ structures

<table>
<thead>
<tr>
<th>№</th>
<th>Department</th>
<th>Bank name</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Financial accounting system and control processes are implemented by the departments of finance and accounting, which are under executive management.</td>
<td>Golomt bank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TD bank</td>
</tr>
<tr>
<td>II</td>
<td>Financial accounting system and control processes are implemented by the departments of finance and operation, which are under executive management.</td>
<td>Khan bank</td>
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<td></td>
<td></td>
<td>XAC bank</td>
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<tr>
<td></td>
<td></td>
<td>State bank</td>
</tr>
<tr>
<td>III</td>
<td>Financial accounting system and control processes are implemented by the department of finance under executive management.</td>
<td>Chinggis Khan bank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ulaanbaatar City bank</td>
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<td></td>
<td></td>
<td>Capital bank</td>
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<td></td>
<td></td>
<td>Capitron bank</td>
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<td>NI bank</td>
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<td>Arig bank</td>
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<td>Bogd bank</td>
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<td></td>
<td></td>
<td>Credit bank</td>
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<td></td>
<td></td>
<td>Trans bank</td>
</tr>
</tbody>
</table>

Source: Calculations by researcher
Financial accounting function is to provide financial reports and information by recording a day-to-day transactions and summarizing those data; however, it cannot record some of the transactions that are related to activities and information.

According to the results of the study, the following common issues of commercial bank can be observed:

- Differences of commercial banks costing are dependable to their asset amount. Cost information necessity is comparatively higher for big and medium sized banks as opposed to small sized banks. With regard to this, big and medium sized banks are trying to estimate their service cost and to enhance the cost estimation accuracy.
- It seems that needs of the product cost information is increased due to the operational expansions for medium and large category banks.
- Banking sector still could not fully estimate their product cost.
- There is needs of improvement on traditional costing system that currently used in banking sector.

In the banks sector, there is a great need to improve and adjust costing system with market requirement; however, this issue has not fully studied yet. In addition, there is still no clear and complete understanding for function and necessity of cost accounting system.

**Commercial bank’s accounting and information system framework:**

Commercial bank’s programs and software are concentrated on information technology department. The information technology departments are responsible to provide reliable, secure, continuous and stable operations of hardware, software, internal and external server, and databases. In addition, the department is
also responsible for constantly updating and developing their programs and software, producing the standards, guidelines, procedures, and process of information technology.

The survey was taken from 28 bank officers, who works in information technology department and executive management, from 13 different banks by face-to-face with an in-person interview and questionnaire for determining the current trends of information technology system. Table 2 shows the programs of commercial banks that are using in 2015.

The accounting software produces reports of financial statements, cash flow statement, balance analysis, and reserve money supply. Management information system is a website based software, and it is used for providing necessary information to all managers and executives.

The principles of the system anticipate a user access to a system which describes the rights for each user actions and statements. The system creates historical data by downloading all account information and transactions related to the account data from basic bank accounting system, such as deposit, loans, collateral as well as off-balance sheet activity, etc. This system has a several disadvantages:

- Currently system generated reports are based on data collected until previous day. In addition, system cannot forecast future based on historical data.
- It cannot calculate the changes on the other information, if one changes some variables. For example, system can produce information in the fastest 5-10 minute, and is some cases it took 15-20 days to generate.
Table 2. Main programs for accounting of the commercial bank accounting

<table>
<thead>
<tr>
<th>№</th>
<th>Bank name</th>
<th>Main program</th>
<th>Information system</th>
<th>Supporting softwares for decision making and management</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Khan bank</td>
<td>Banks program</td>
<td>Exist</td>
<td>Does not exist</td>
</tr>
<tr>
<td>2</td>
<td>Golomt bank</td>
<td>Infosys</td>
<td>Exist – Oracle BI</td>
<td>Does not exist</td>
</tr>
<tr>
<td>3</td>
<td>TD bank</td>
<td>Grapebank</td>
<td>Exist - Gramis</td>
<td>Does not exist</td>
</tr>
<tr>
<td>4</td>
<td>XAC bank</td>
<td>Flexcube</td>
<td>Exist</td>
<td>Does not exist</td>
</tr>
<tr>
<td>5</td>
<td>State bank</td>
<td>Grapebank</td>
<td>Exist - Gramis</td>
<td>Does not exist</td>
</tr>
<tr>
<td>6</td>
<td>Ulaanbaatar city bank</td>
<td>Grapebank</td>
<td>Exist - Gramis</td>
<td>Does not exist</td>
</tr>
<tr>
<td>7</td>
<td>Capital bank</td>
<td>Grapebank</td>
<td>Exist - Gramis</td>
<td>Does not exist</td>
</tr>
<tr>
<td>8</td>
<td>Capitron bank</td>
<td>Grapebank</td>
<td>Exist - Gramis</td>
<td>Does not exist</td>
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<tr>
<td>9</td>
<td>NI bank</td>
<td>Grapebank</td>
<td>Exist - Gramis</td>
<td>Does not exist</td>
</tr>
<tr>
<td>10</td>
<td>Credit bank</td>
<td>Grapebank</td>
<td>Exist - Gramis</td>
<td>Does not exist</td>
</tr>
<tr>
<td>11</td>
<td>Chinggis Khan bank</td>
<td>R-Style program</td>
<td>Exist</td>
<td>Does not exist</td>
</tr>
<tr>
<td>12</td>
<td>Arig bank</td>
<td>Grapebank</td>
<td>Exist - Gramis</td>
<td>Does not exist</td>
</tr>
<tr>
<td>13</td>
<td>Bogd bank</td>
<td>Grapebank</td>
<td>Exist - Gramis</td>
<td>Does not exist</td>
</tr>
<tr>
<td>14</td>
<td>Trans bank</td>
<td>Macro Opace 5.0</td>
<td>Exist</td>
<td>Does not exist</td>
</tr>
</tbody>
</table>

Source: Calculations by researcher
• Departments get information separately, but it might produce inefficient usage of time and salary cost when information gathered in same time and load increases.
• Downloading some report takes a lot of time. Some time they produce the report manually.
• Data of accounting system is used in banking level, but it cannot be merged or converted into other systems.

In addition, according to the survey results, current commercial banks are not using any software that can provide necessary information to support management and decision-making. Furthermore, the produced reports do not give predictions about future trends. The results of the study have collectively reached the following conclusions. Include:
• There is no united understanding about a cost.
• There is no appropriate costing system in current banking sector of Mongolia. Some of the banks are using costing system, but the using systems are incomplete to fully implement the costing system.
• Current financial accounting systems that are used in commercial banks of Mongolia can only produce information regarding to financial accounting activity; however, it cannot provide necessary information for costing.

There are vital needs of initiating appropriate costing system, which is the major part of managerial accounting system, by changing organizational structure and using appropriate software that can support costing system
APPROACHES FOR IMPROVING THE COMMERCIAL BANKS’ COSTING SYSTEM

Current financial accounting of commercial bank is providing an accurate information to the user, which is the main purpose of accounting, but it is not providing sufficient information for future operating budgets, planning, and management decision.

In addition, there is an important need of using costing system, and its purpose is to provide information regarding product and service costs to internal users of the organization. Cost accounting provides necessary information for conducting financial and managerial accounting; thus, it is a bridge between these two accounting. The main feature of the cost accounting is that it differs from financial accounting by incorporating quantitative and non-quantitative information at the unit level. Internal users of the commercial banks uses financial and cost information to conduct analysis and researches for future management decisions related to its operations.

Cost accounting can be a source of important information used in making management decisions, but it depends on how the cost information of commercial bank are developed.

Measuring cost

Collecting data of the costs – Cost data are collected by classifications of financial and operational areas. General ledger, payroll, and purchase prices are classified in financial category, whereas reserve driver, operational driver, level, and quantity of output, etc., are classified in operational category. These collected two category data are then combined for preparing the cost base.

Allocating cost data – Allocation can be done in two phases. In the first phase, principles and concepts of the cost are determined.
In the second phase, the most suitable costing methods will be chosen among the costing methods, and then measures the cost.

**Usage of cost information for supporting decision making**

Cost information is used in management decision-making processes, which can be controlling, valuing, forecasting, etc. There is an opportunity to reduce costs and increase profits by understanding the sources of costs and the possibility of controlling it, and this information can be obtained from cost information.

**Processes of measuring cost**

Costing is a process of allocation all the costs into products and services based on consumptions of the resources. This also applies to the process of determining the amount of resources used for each cost object.

Costing methodologies must adhere to the following principles:

- **Accuracy** – Product cost must be accurate and realistic. If the product cost is same as the source consumption, the costing method is more accurate and optimal for the entity.
- **Efficiency** – Another factor to choose costing is the cost related to using the system and its efficiency. If the costing system is more complex, it might be a relatively costly and efficient than simple systems.

Measuring product cost gives opportunity to determine its cost component. It is necessary to maintain a permanent record for using this information on management decision making.

**CONCLUSION**

Currently commercial bank has no potential to produce
sufficient information that required for optimal decision making, future operating budget and planning. In order to fulfill this information needs, efficient and effective cost accounting and costing system is required. Commercial bank needs to choose appropriate costing system that is suitable for their operations, among the costing methods by implementing related analysis and investing required investment.

Traditional costing system allocates costs based on main cost. The traditional costing system is a less relevant to estimate, plan, and control product cost in the field of commercial banking activity due to its cost structure and characteristic.

ABC system creates sufficient conditions to provide accurate information to management by improving the process of indirect cost allocation to product. The intentional distribution of indirect transformation cost to the product, service, and customers is important to make decisions by the management.

REFERENCES


