CHAPTER-1

INTRODUCTION

1.1 Background

1.1.1 Traditional Costing Vs Activity Based Costing System

Traditional volume based cost management systems have been criticized for their failure to produce timely useful information to meet users' need and reflect the new competitive environment. The main problem is that traditional cost systems that apportion overhead costs of indirect activities based on direct costs such as material and labour can yield incorrect information (Lisa M. Ellram, 1995, page No.22). Understanding the problems of traditional volume based cost management system, a significant number of companies in North America, Europe and Latin America have adopted Activity Based Costing System. The popularity of ABCS can be attributed to its benefits over traditional volume based overhead allocation system on some important aspects of cost management such as strategic decisions for pricing and product mix. ABCS helps firms to focus on enterprise excellence by tracing financial and operating information for a continuous improvement of significant activities.

Though ABCS can provide firms with various benefits such as decision supports and profit improvement, it is not popular in Nepal. The lack of documentation about the development of ABCS in Nepal suggests that there is a need for an empirical research on applicability of ABCS in Nepal. This study will focus on the practices and development of ABCS in commercial banks of Nepal, one of the most emerging and growing sector of service industry

in Nepal. Many modern management accounting practices have been introduced to commercial banks in Nepal but ABCS is still not popular in commercial banks in Nepal till to date.

1.1.2 Commercial Banks in Nepal

It is reasonably simple exercise to identify a bank as an institution whose essential operation is to take deposits from public and to lend money. Banks accumulate ideal money from the general public by providing attractive sound interest rate in their deposits and disburse the collected deposits as loan to business organization, industrial sector, agriculture sector and needy people. So we can say that the main task of commercial bank is to mobilize ideal resources in productive areas by collecting it from scattered sources and generate profit. Thus, banks act as intermediaries channeling saving into the investment and consumption through them, banks fulfill the investment requirement of service with the credit needs investors. In this way the bank plays an imperative role in the economy by providing effective service, efficiency towards the attainment of economic development.

Nepal is a very small land locked country with a very low per capita income. Only 49 percent of the total population is literate and 38% of total population is below poverty line, which is growing speedily in the country. Capital formation is one of the important factors in economic development. It leads to increase in the size of the national output, income and employment, solving the problem of inflation and balance of payment and making the economy free from the burden of foreign debt. The significance and the need of the bank is confining to the urban people only to a much extent as seen from the openings of such commercial banks in the urban areas and no signs of such

financial institutions in rural areas where it is most pressing. Bank makes a better use of money and mobilizes the people's saving in productive sectors. It helps in every aspect of the government. Nevertheless, the bank is the best advisor for all the economic activities of the government.

Commercial bank occupies quite an important place in the framework of every economy because it provides capital for the development of trade, industry and business investing the collected saving as deposits. Besides this, commercial bank renders numerous services to their customers and shareholders in view of facilitating their economic and social life. All the economic activities of each and every country are greatly influenced by the commercial banking business of country. Commercial banks are playing active role and have changed the economic structure of the world. Broadly defined Capital and Assets Structures Management of commercial bank includes all the policies and approaches designed to obtain funds from deposit and investment. It also provides the flexibility and mobility to the customer because the payment can be mostly speedily and efficiently carried out. Commercial banks permitted to accept demands deposits.

According to the American Institute of Banking, "Commercial bank is corporations which accepts demand deposits subject to check and make short-term loans to business enterprise regardless of the scope to its other sources". (American Institute of Banking, Principle of Banking Operation, USA, 1972, page-345).

1.2 Focus of the Study

This dissertation reports the result of a survey soliciting the opinions of financial and marketing executives about the problems and benefits associated with traditional overhead allocation system and Activity Based Costing System. Thirty five respondents at seven commercial banks reported that, on average, overhead was very important in their companies' operational decision making. Most of the participants had heard about the concept of ABCS, but were not very familiar with it. Consistent with literature review, respondent viewed traditional overhead allocation system to be simple and cost effective, but inaccurate in pricing and not relevant in decision making. They also indicated that while ABCS was useful in making decisions, reducing non value added activities, increasing productivity and focusing on company goal, it was difficult to implement. In the study, only 1 of 7 commercial banks had occasionally used ABCS. Accurate costing, better cost control and profitability, strategic pricing and reduction of redundant and non value added work were reasons given for the occasional use. Consistent with prior ABCS research, high operational cost, doubt about the benefits of ABCS and limited resources were major reasons for not using ABCS in those commercial banks.

1.3 Statement of the Problem

In recent years, ABCS has been promoted as a basis for making strategic decisions and for improving profit performance. However, Mc Gowan and Klammer (1997, pp 217) stated that although ABCS has found rapid and wide acceptance, there is significant diversity of opinion, regarding the efficiency of ABCS. Some writers pointed out that when ABCS is used in conjunction with other management techniques, it would improve its successful

implementation. Gupta, Baexendale and Mc Nomara, (1997, pp. 23) associated the successful implementation of ABCS with the TOC; Olsen (1998, pp. 5) who indicated that ABCS is a compliment to TQM, However, Mc Gowan (1998, pp. 31) suggested that empirical research is needed to document the financial consequences of ABCS implementation without the assistance of other business management initiatives.

1.4 Main & Specific Objectives of the Study

The objectives of this research are as follows

To establish the perceptions of staff regarding:

- Advantages and disadvantages of traditional volume based cost management.
- The benefits of ABCS.
- The problems of adoption and practice of ABCS.

1.5 Significance of the Study

The significance of this research is to provide relevant information to the managers of commercial banks enabling them to make better decisions with regard to the successful adoption of ABCS.

1.6 Limitations of the Study

The study has suffered from the following limitations:

- The focus of the study is given for seven commercial banks among many banks.
- Time factors are other major limitations. The study is done in short time.

- The study is based mainly on interviews, opinions, perceptions and attitudes of respondents.
- The study is simply a partial fulfillment of MBS degree and prepared within time constraint, which weakened adequacy of the study.

CHAPTER -2

AN OVERVIEW OF COMMERCIAL BANKS IN NEPAL

2.1 History, Environment and Evolution of Commercial Banks in Nepal

2.1.1 History

Nepal's first commercial bank, the Nepal Bank Limited, was established in 1937. The government owned 51 percent of the shares in the bank and controlled its operations to a large extent. Nepal Bank Limited was headquartered in Kathmandu and had branches in other parts of the country. There were other government banking institutions. RBB (National Commercial Bank), a state-owned commercial bank, was established in 1966. The LRSC was established in 1966 to deal with finances related to land reforms.

Commercial banks play significant role in the economic development in nation. In Nepal, 19 commercial banks are in operation and providing services to the business and industries through long-term and short-term loans and facilitating business for foreign exchange and remittance via national and international network.

In Nepal, during 1990s and later many organizations faced major changes in competitive business environment. Before 1990s organizations such as those operating in the airlines, utilities, and financial sectors were either government owned monopolies or operated in a highly regulated and non-competitive environment. These organizations were not subject to any great pressures to improve the quality and efficiency of their operations or by

eliminating services that were making losses. Some public enterprises were getting direct subsidies from government for equalizing their operational losses.

Privatization of some of the government owned enterprises and deregulation in early 1990s changed the competitive environment in Nepalese business scenario. Large numbers of joint venture commercial banks and development banks were established and the process is being continued.

The development of banking system in Nepal was emerged after the liberalization and free market concept. In the beginning of 1980s, private commercial banks came into operation in collaboration with foreign banks. It took pace after 1990s and number of financial institutions has been increased. All the newly established commercial banks tried to operate efficiently and effectively resulting high competition in Nepalese banking industry. In this connection, the service operation of commercial banks has become more important for the number of reasons:

- Competition in financial markets has intensified with the entry of new joint venture and domestic banks, and other financial intermediaries.
- The cost of operating the bank branches has been with the need of better quality service.
- Increased in Non Performing Assets and
- Increased in liquidity position

2.1.2 Competitive Environment

The degree of competition in Nepalese commercial banking sector is very high. The majority (76.9 percent) managers of the

branches of the commercial banks of Nepal feel intense competition. The commercial banks of Nepal are competing mainly on service followed by the cost and other factors respectively.

a. Generic strategy of Nepalese Commercial Banks

The generic strategy of Nepalese commercial banks has been divided for two main areas of business: deposit and lending. The different branches of the same commercial banks at the different geographical location are adapting different strategy. Around 52 percent of branches of commercial banks are concentrating on differentiation strategy and 47.4 percent are following focus strategy to attract the depositors. In case of lending, majority of branches (52.6 percent) of such banks are adapting differentiation strategy followed by focus (42.1 percent) and cost leadership (5.3 percent).

b. Services Offered by Nepalese Commercial Banks

Nepalese commercial banks have been offering number of services to their customers. The services are ranging from 3 to more than 25. The majority of such commercial banks (42.3 percent) are offering more than 21 products. Similarly 15.4 percent and 30.8 percent of such branches of commercial banks are offering 16-20 and 5-10 services respectively. Only few (11.5 percent) are offering 1-5 services to their customers. In order to compete in highly competitive environment, these banks are continuously introducing new services through their branches established at different places in the country. Majority (76.9 percent) of such commercial banks are introducing 3-4 services every year, and only 11.5 percent of such branches of the

commercial banks are offering 5-6 and 6-7 services every year.

c. Target Setting Practice

All the commercial banks of Nepal set target for their branches for the purpose of planning and controlling the activities. In majority (96.2 percent) of the branches, the target is fixed in terms of number of clients, amount of deposit, and the amount of lending. Only in few (3.8 percent) branches, the target is fixed in other terms. Concerning to individual level, 83.3 percent employees responded their banks set target for them and only 16.7 percent responded they don't get any target for their performance. Out of the individuals who think their bank set target for them, 95.4 percent feel the target is clearly communicated to them and only 4.6 percent feel that the target is not clearly communicated to them.

d. Performance Measurement

All commercial banks compare actual performance with predetermined target of their branches frequently. Coming to the individual level, 65.4 percent respondents feel their actual performance is compared with predetermined target and remaining do not know whether their actual performance is compared with standard or not. The managers of different commercial banks still desire to evaluate the performance of their banks and branches on the basis of net profit margin. After net profit margin, they tend to support ROE, ROI, EVA and others (including the degree of NPA) respectively.

2.1.3 Evolution of Joint Venture Banks and e-Banking

- Major Milestones

- Establishment of first joint venture Bank, Nepal Arab Limited (now NABIL Bank) in 1984.
- NABIL Bank introduced Credit Cards in Nepal in early 1990.
- Automated Teller Machine (ATM) was first introduced by another JV Bank, Himalayan Bank Ltd. in 1995.
- Himalayan Bank was also the first bank to introduce Tele-Banking (Telephone Banking) in Nepal.
- Kumari Bank Ltd. was established in the year 2001 who first introduced Internet-Banking in 2002.
- Laxmi Bank Limited was the first bank to introduce SMS-Banking (or Mobile Banking) in Nepal in the year 2004.

2.2 Future of e-Banking

- Cashless transactions
- Cash transact via non-cash elements; like credit cards, internet banking, and convenient way to transact if distance matters.

2.3 Conclusion

The Nepalese commercial banking sector is very competitive. The commercial banks are competing mainly in service in order to put in competitive position, majority of the branches of commercial banks have been adapting differentiation strategy. The response

shows that different branches of the similar bank have adapted different strategy and few of the banks have followed more than one strategy at the same time.

All the commercial banks are applying the concept of management control system by setting target for their branch and at individual and comparing it with actual performance. The target for a branch is fixed in terms of number of clients, amount of deposit and lending. Target is also fixed for the majority of individuals.

2.4 Brief Introduction of Banks under Study

35 executives (21 financial executives and 14 marketing executives) from 7 commercial banks are selected and interviewed for their perceptions, attitudes, opinions about the merits and demerits of traditional overhead allocation and ABCS and reasons for adapting or not adapting ABCS in their commercial banks:

a. Standard Chartered Bank Nepal Ltd.

Nepal Grindlays Bank Ltd. (recently named Standard Chartered Bank Nepal Ltd.) was established in 1987 A.D. as a joint venture bank with 50% of the equity share capital originally owned by ANZ Grindlays Bank, UK that managed and controlled overall activities of the bank. The bank has made significant contribution in the Nepalese banking sector since its inception.

In August 2000, the ownership of ANZ Grindlays Bank, U.K. was transferred to SCB, Australia. Since then, the bank is being managed and controlled by SCBL Australia, as Standard Chartered Bank Nepal Ltd. (SCBNL) in Nepal. SCBL

holds 50% of total equity capital investment. Out of 35% of the total equity share capital that was held by NBL, Standard Chartered Bank, UK, now has bought 25%. The general public holds the remaining 25% shares.

The bank is being managed under joint venture & technical services agreement (T.S.A.) signed between SCB and Nepalese promoters. The bank has been providing various banking services to its customers through its braches nation wide. It has four branches including its main branch /corporate office in the Kathmandu valley. The bank is well equipped with the latest technology in the banking sector. It leads the Nepalese list in the best 500 banks of Asia as voted by Fortune magazine. It has some of the best banking professionals in the banking industry in Nepal.

Some of the facilities are listed below.

- Tele-banking
- Credit Card facilities
- Foreign Currency Transaction
- Automated Teller Machines
- Personalized & Corporate Financial services
- SWIFT, TELEX
- Western Union Money Transfer
- Money Gram

b. Machhapuchre Bank Limited

Machhapuchchhre Bank Limited started its operation in December 10, 2000 as the fourteenth commercial bank and the first commercial bank in the western part of Nepal. The main head office of MBL is located in Pokhara and the corporate office is in Kathmandu. The bank has 10 branches located all over the major parts of the country. The bank also established its branch in Jomsom, Mustang district. The bank aims to serve the people of both urban and rural areas.

The bank has the paid up capital of Rs. 55 million, of which the promoters group, public and employees hold 70 %, 25 % and 5 % of total shares respectively. The bank has the deposit and loan and advances of Rs. 5,587 million and Rs. 5,130 million respectively. The bank has adopted computerized system in banking. The main software of the bank is called Globus and the bank has the Any Branch Banking System (ABBS). The bank also provides different services such as ATM and electronic banking etc. The bank has been providing loans and advances in various sectors such as agriculture, manufacturing, deprived sector, industry and consumer financing etc.

c. Siddhartha Bank Limited (SBL)

Siddhartha Bank Limited commenced operations in 2002. The Bank is promoted by a group of highly reputed Nepalese dignitaries having wide commercial experience. It provides a full range of commercial banking services through its ten branches established in Kathmandu, Birgunj, Biratnagar, Pokhara, Damak, Narayangarh and Patan. The management team of the Bank is geared to meet the challenges and keep

a breast with the changes. The Vision statement of the Bank describes the core values and purposes that guide the Bank as well as an envisioned future. Fundamentally, in all dealings SBL earnestly believes in transparency, financial soundness, efficiency and better technology.

d. Bank of Kathmandu

Bank of Kathmandu Limited has become a prominent name in the Nepalese banking sector. Bank of Kathmandu Limited (BOK) has today become a landmark in the Nepalese banking sector by being among the few commercial banks which is entirely managed by Nepalese professionals and owned by the general public.

BOK started its operation in March 1995 with the objective to stimulate the Nepalese economy and take it to newer heights. BOK also aims to facilitate the nation's economy and to become more competitive globally. To achieve these, BOK has been focusing on its set objectives right from the beginning. To highlight its few objectives:

- To contribute to the sustainable development of the nation by mobilizing domestic savings and channeling them to productive areas
- To use the latest banking technology to provide better, reliable and efficient services at a reasonable cost
- To facilitate trade by making financial transactions easier, faster and more reliable through relationships with foreign banks and money transfer agencies
- To contribute to the overall social development of Nepal

e. Kumari Bank Limited

Kumari Bank Limited, came into existence as the fifteenth commercial bank of Nepal by starting its banking operations from Chaitra 21, 2057 B.S (April 03, 2001) with an objective of providing competitive and modern banking services in the Nepalese financial market. The bank has paid up capital of Rs. 1078.272 million, of which 70 % is contributed from promoters and remaining from public.

Kumari Bank Ltd has been providing wide - range of modern banking services through 16 points of representations located in various urban and semi urban part of the country, 11 outside and 5 inside the valley. The bank is pioneer in providing some of the latest / lucrative banking services like E-Banking and SMS banking services in Nepal. The bank always focus on building sound technology driven internal system to cater the changing needs of the customers that enhance high comfort and value. The adoption of modern Globus Software, developed by Temenos NV, Switzerland and arrangement of centralized data base system enables customer to make highly secured transactions in any branch regardless of having account with particular branch. Similarly the bank has been providing 365 days banking facilities, extended banking hours till 7 PM in the evening, utility bill payment services, inward and outward remittance services, and various other banking services.

Visa Electron Debit Card, which is accessible in entire VISA linked ATMs (including 18 own ATMs) and POS (Point of Sale) terminals both in Nepal and India, has also added convenience to the customers. The bank has been able to get recognition as an innovative and fast growing institution

striving to enhance customer value and satisfaction by backing transparent business practice, professional management, corporate governance and total quality management as the organizational mission.

The key focus of the bank is always center on serving unfulfilled needs of all classes of customers located in various parts of the country by offering modern and competitive banking products and services in their door step. The bank always prioritizes the priorities of the valued customers.

f. Himalayan Bank Limited

Himalayan Bank was established in 1993 in joint venture with Habib Bank Limited of Pakistan. Despite the cut-throat competition in the Nepalese Banking sector, Himalayan Bank has been able to maintain a lead in the primary banking activities- Loans and Deposits.

Legacy of Himalayan lives on in an institution that's known throughout Nepal for its innovative approaches to merchandising and customer service. Products such as Premium Savings Account, HBL Proprietary Card and Millionaire Deposit Scheme besides services such as ATMs and Tele-banking were first introduced by HBL. Other financial institutions in the country have been following our lead by introducing similar products and services. Therefore, we stand for the innovations that we bring about in this country to help our Customers besides modernizing the banking sector. With the highest deposit base and loan portfolio amongst private sector banks and extending guarantees to correspondent banks covering exposure of other local banks under our credit standing with foreign

correspondent banks, we believe we obviously lead the banking sector of Nepal. The most recent rating of HBL by Bankers' Almanac as country's number 1 Bank easily confirms our claim.

All Branches of HBL are integrated into Globus (developed by Temenos), the single Banking software where the Bank has made substantial investments. This has helped the Bank provide services like 'Any Branch Banking Facility', Internet Banking and SMS Banking. Living up to the expectations and aspirations of the Customers and other stakeholders of being innovative, HBL very recently introduced several new products and services. Millionaire Deposit Scheme, Small Business Enterprises Loan, Pre-paid Visa Card, International Travel Quota Credit Card, Consumer Finance through Credit Card and online TOEFL, SAT, IELTS, etc. fee payment facility are some of the products and services. HBL also has a dedicated offsite 'Disaster Recovery Management System'. Looking at the number of Nepalese workers abroad and their need for formal money transfer channel; HBL has developed exclusive and proprietary online money transfer software- HimalRemitTM. By deputing our own staff with technical tie-ups with local exchange houses and banks, in the Middle East and Gulf region, HBL is the biggest inward remittance handling Bank in Nepal. All this only reflects that HBL has an outside-in rather than inside-out approach where Customers' needs and wants stand first.

g. Nabil Bank Limited

Nabil Bank Limited, the first foreign joint venture bank of Nepal, started operations in July 1984. Nabil was incorporated with the objective of extending international

standard modern banking services to various sectors of the society. Pursuing its objective, Nabil provides a full range of commercial banking services through its 19 points of representation across the kingdom and over 170 reputed correspondent banks across the globe. Nabil, as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sector, represents a milestone in the banking history of Nepal as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business. Operations of the bank including day-to-day operations and risk management are managed by highly qualified and experienced management team. Bank is fully equipped with modern technology which includes ATMs, credit cards, state-of-art, world-renowned software from Infosys Technologies System, Banglore, India, Internet banking system and Telebanking system.

CHAPTER - 3

REVIEW OF LITERATURE

In traditional costing management system, direct labour stated in hours or rupees has been relied on as the basis for assigning overhead costs to products. The assumption underlying the traditional costing approach is that all overhead resources are consumed by products at the same rate. In the past, as labour cost constituted a major proportion of the total product costs, the costing approach did not result in serious distortion in product costing. However the traditional cost management is no longer workable due to the advance of technology and the proliferation in product mix variety, complexity and diversity (Garrison and Noreen 1997; pp. 153-169). Automation has resulted in substantial decrease in the amount of direct labour required in the manufacturing process. Total overhead cost has also increased to the point that overhead cost has also increased to the point that overhead and direct labour are no longer highly correlated. In addition, increase in product diversity has led to manufacturing companies producing a wider range of products which differ substantially in volume, lot size and complexity of design, Kaplan and Cooper noted, as did engineers and product managers, that significant amounts of overhead activities, from testing to material handling, are disproportionately consumed by certain parts, products, and product families (Cokins, Stratton and Helbling 1993, pp. 23-27). Hence, using traditional accounting method of overhead allocation, product costs are glossary distorted. The traditional costing approach has frequently resulted in over-costing of high-volume and standard products and under-costing of low-volume and customized

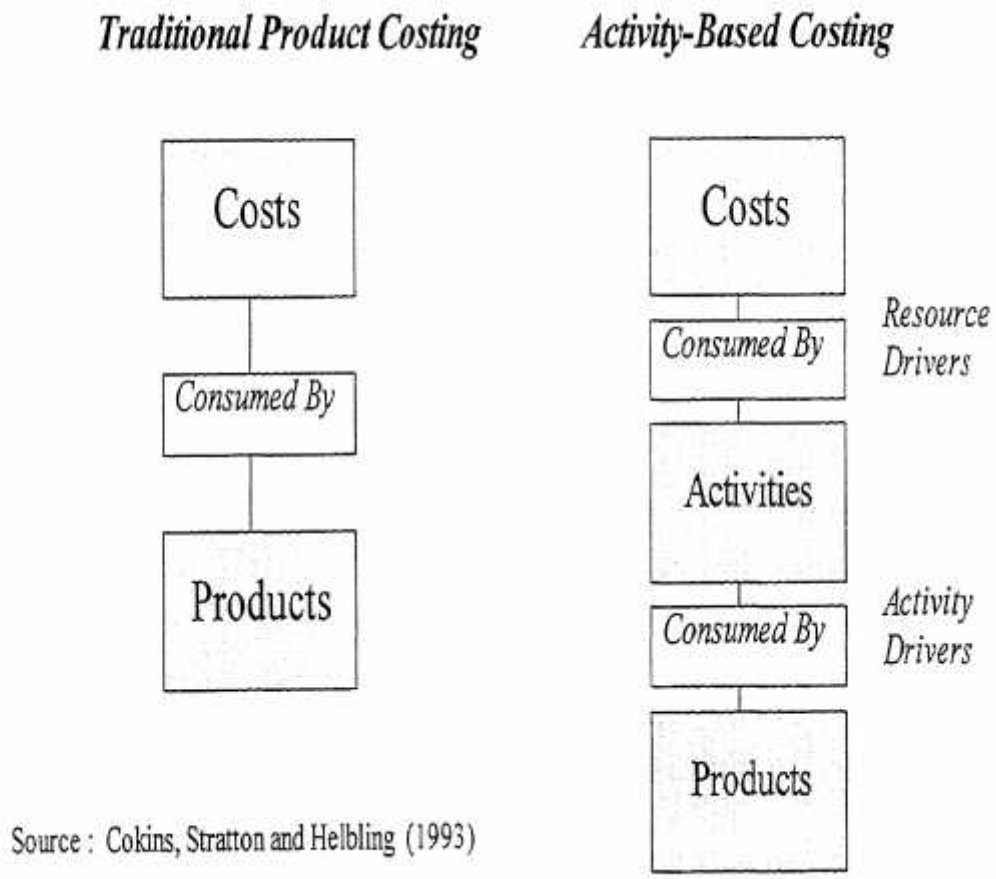
products. The approach can not provide management the necessary and relevant information to control and increase profitability.

Cokins, Stratton and Helbling (1993, pp. 23-27) suggests that ABCS is not a new concept. Similar to the concept of Just in Time (JIT), ABCS was first described by accountants in the 1800s and early 1900s.The new emerged managerial techniques of ABCS and ABCM is actually a repackaging of old techniques. Since 1991, professors Robert S. Kaplan and Robin Cooper of the Harvard Business School became leading spokesmen by articulating in business periodicals how misapplications of, overhead could distort the true costs of products (Cokins, Stratton and Helbling 1993, pp. 23-27).

ABCS overcomes the deficiencies of the conventional overhead costing by linking cost to overhead determinants or the activity levels (Cokins, Stratton and Helbling 1993, pp. 23-27; Innes and Mitchell 1997, 190-203). As shown in the Exhibit 1, overheads are arbitrarily allocated to products by traditional product costing, based on simple assumptions such as direct labour stated in hours or rupees. On the other hand, ABCS traces cost based on casual relationship. The key assumption underlying ABCS is that resources are consumed by activities and activities are caused by product and services. The costing techniques under ABCS involve a two- stage cost allocation. Rather than utilizing a single cost pool and allocation base, it first divides overhead resources into a series of activity cost pools such as purchasing, maintenance and quality control that are performed to produce product or services. Costs are then assigned to activities based on resources expended. In the next process, each activity cost is assigned to cost objects, such as product or customers, based on their actual use of the activities. Hence, the calculated output cost reflects

the underlying patterns of activity used by outputs. ABCS removes the defect of traditional cost system that allocation does not correlate with the resources that are actually consumed by each product or service.

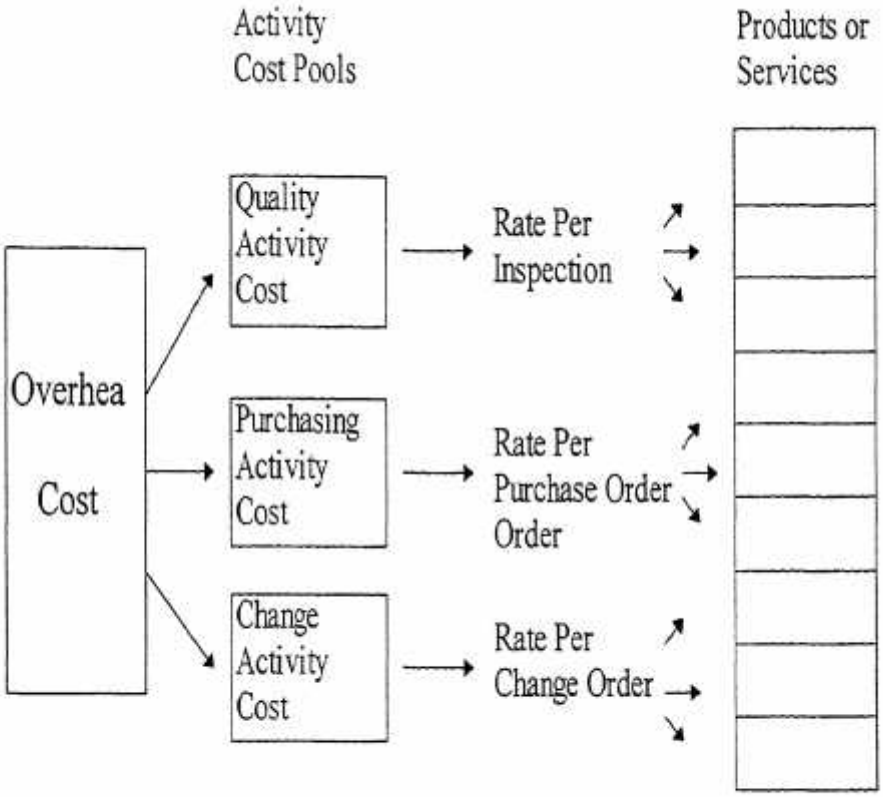
Exhibit 3.1 – Comparison of Traditional Costing and Activity Based Costing Approach



Source : Cokins, Stratton and Helbling (1993)

Take the following simplified activity-based costing framework as an example:

Exhibit 3.2 – An illustrated example of ABCS framework



Source : Innes; Mitchell, The Services Industrial Journal, Vol. 17, 1997, Pg. 191

ABCS first segments the overhead cost into three activity-based cost pools: quality activity cost, purchasing cost and change activity cost. Then, a cost rate for each activity is calculated, based on the cost drivers of each activity which in this example are inspection, purchase orders and change orders. These multiple rates can then be used to cost the object, based on their consumption pattern of the activities. The more quality control, purchasing and change activities a product consumers, the more overhead it will absorb. As overhead cost are more accurately

traced to final outputs, hence, the high volume, standard outputs will no longer subsidize low volume, customized outputs.

These refined treatments of overhead cost usually lead to changes in pricing, product mix and marketing policies which will result in improvement in companies' profitability (Innes and Mitchell 1997, pp. 190-203). The unit cost information derived from ABCS provides a basis for pricing decisions and re-focuses on products with high contribution. Cost-drivers can also help to identify how individual customers influence the cost and hence help to analyze customer profiles. The cost driver rate for each activity also serves as a stimulus to service designers, giving them a cost conscious mind when designing new services/ products. ABCS can therefore enhance a company's marketing intelligence and strategy.

The benefits of ABCS are not only restricted to accurate costing which leads to better pricing decisions, product mix and sourcing. They also provide managers a tool to continuously improve quality, service, cost, flexibility and profitability (Cokins, Stratton and Helbling 1993, pp. 23-27). Pioneering companies such as Hewlett-Packard in the United States became early pilot ABCS user. As time passed, users have expanded ABCS into activity based cost management (ABCM), a more encompassing term that includes managing products as well as a more proper assignment of resources to operating processes. ABCM provides information of activities analysis based on using ABCS data and other tools to achieve a continuous improvement in operations.

ABCS is a proactive tool which supports process analysis and design, and to some extent process re-engineering. ABCS provides an additional measurement of the activities in relation to the products and services offered by a company. This useful

perspective that costs are analyzed by activities gives a novel way of cost reduction. Activities are prioritized and assigned with value. Activities that are non-value added (do not add worth to the final products to customers) or costly effects of operating business processes can be identified and reduced. It helps companies to focus on productivity by examining product performance and resource consumption. It answers management queries whether they are receiving adequate revenue for the value-added services they provide to their customers.

The ABCS techniques are also consistent with the ideas of Total Quality Management (TQM) which emphasizes on a commitment by management to have a company-wide drive toward excellence in all aspects of the products and services that are important to the customers. Using ABCS, costs can be analyzed by activities and be reduced.

Activities for controlling quality can be placed into 4 classifications: prevention activities, appraisal activities, internal failure activities and external activities (Garrison and Noreen 1997, pp. 153-169). Prevention activities such as quality engineering and supervision of prevention activities are activities conducted to reduce the number of defects in products or services. Appraisal activities are activities such as test and inspection of incoming materials and in-process goods carried out to identify defective products before they are delivered to customers. Internal failure activities are activities that are resulted from identification of defects during the appraisal process. Some examples of internal failure activities are product rework and re-testing of reworked products. External failure activities are activities resulted after defective products are found by customers. Some examples of external failure activities are warranty repairs and replacements and complaint handling.

According to Cokins, Stratton and Helbling (1993, pp. 23-27), some companies estimate that their costs of conformance and nonconformance exceed 80 percent of their overhead cost. Using TQM techniques such as root-cause analysis or process value analysis, both cost of conformance and nonconformance can be targeted for improvement. Activities should first be ranked in priorities and then used to build an operating budget that is linked to individuals to ensure a clear focus of responsibilities. The activity costs, cost drivers and cost-driver rates can be used as performance measures of those involved in controlling the activities. As the cost-driver volume is usually linked to activity outputs, the cost driver variance provides feedback on capacity utilization and efficiency of individual activities. Attributes other than volume such as lead times or errors can also be measured. This allows various aspects of quality to be monitored and improved.

With data provided from ABCS, companies can proactively reduce costs including cost of quality. This helps companies increase their competitiveness without reducing profit margin. At the same time, the improved process flow creates an environment with fewer mistakes and better customer response. ABCS can help to enhance a company's corporate image and customer satisfaction.

While ABCS was initially developed in a manufacturing context, it was found to be equally applicable in service industry (Bussey 1993, pp. 40-65; Innes and Mitchell 1997, pp. 190-203). Service businesses can also realize significant benefits by understanding how cost behaviour relates to business operations. It is reported that ABCS was successfully applied in industries such as telecommunications, transport, wholesale and distribution, medical health, banking, information services. Service providers such as banks and insurance companies have been increasingly

deploying ABCS in recent years (Innes and Mitchell 1997, pp. 190-203).

According to survey conducted by Innes and Mitchell in 1993 on UK's 60 large financial institutions, 54 percent of 17 respondents were using ABCS in their daily operation. The other respondents had plans to introduce ABCS. Over half of those using ABCS claimed that the cost technique had already helped to significantly reduce their cost. They found it an important and a successful application in profitability analysis. Over 80 percent utilized the output cost in their pricing decisions and half of the users considered that it had a significant impact on their firm's sales. 59 percent had adopted it to influence new service design process and considered it an important and successful application in this respect.

In other successful cases reported by Sweeny and Mays, the ABCS concept helped First Tennessee to improve its profit by approximately US$ 11 million over 5 years. By adapting the ABCS concept, the bank found that 30 percent of its customers were providing 88 percent of its profit, while another 30 percent of its customers were serviced at a loss of 70 percent. The cross subsidy was corrected through the establishment of higher minimum deposit balances, new products and process redesign. Supported by ABCS, the bank had also carried out internal benchmarking, external benchmarking and process re-engineering to improve its productivity and profitability. It was firmly recognized by the bank's top management that ABCS was a cornerstone of continuous productivity improvement at the First Tennessee.

Porter and Keboe (1993, pp. 24-33) also reported that a successful case of applying ABCS to downsizing and restructuring

support departments that handle various management functions such as personnel, accounting, administration, and material management at Charleston, a Naval Shipyard in South California, after the end of Cold War. Value-added analysis based on ABCM was used to eliminate or streamline activities. It developed process improvements to increase speed and reduce defects and costs for value added activities. On the other hand, non-value added activities were eliminated or reduced. In addition to a consequent cost saving of 23 percent in manpower a year, the breakdown of unit cost data helped the yard make better outsourcing decisions, and measure its performance against outside organization. Accurate ABCS data also helped the yard determine how it would position its bids in competitive price range. The other added benefits of the ABCS to the shipyard included ongoing improvement in operations. ABCS data were easily translated into cost-of-quality (COQ) analysis such as prevention, inspection, and internal and external failure for various problem analysis and improvement planning.

The numerous successful cases of using ABCS indicate that ABCS is certainly applicable to service industry or the benefits of ABCS could be realized by all industries. As this paper focuses on the application of ABCS in Nepalese Commercial Banks, the researcher has searched and found that British Commercial Banks had used something similar to ABCS.

Bussey (1993, pp. 40-65) suggests that the introduction of ABCS is particularly important for utilities such as telecommunication, banking, gas, electricity and water supply and railways because major stimuli for introduction of ABCS exist in utility industry. According to Bussy, the main stimuli for ABCS are derived from the inaccuracies in traditional product costing which are caused by:

a) a huge fixed cost base;

b) a small size for direct labour;

c) rapid change in technology;

d) a sharp fall in the costs of IT and accounting systems;

e) increase in product diversity;

f) intensified competition, and

g) de-regulation

Points (a) and (b) are clearly the problems that most utilities always face while (f) and (g) are particularly appropriate to the utilities in the western countries such as UK and USA, in the light of government privatization policy.

Bussey (1993, pp. 40-65) points out that British Telecom (BT) has adopted its own revised version of ABCS to record accurate product cost. The basic principle underlying BT's costing system is cost causation. In case of line installation for specialized services, the cost principle is relatively simple to apply. However, Bussey suggests little cost items fall into the category. Most of the cost in the industry can be traced to types of equipment or linked to groups of services. To circumvent the problems, special committees made up of financial and non-financial staff were formed in the 1970's. Costs were grouped into a series of cost pools and only appropriate bases (a variety of non-financial data taken from all departments of the company) were used to apportion costs. The aim was to identify the most appropriate determinants of costs and assign them to services. Two typical examples for local exchange and sales and marketing are shown.

Cost apportion for local exchange equipment is difficult. (Local exchanges can be imagined as a computer server that provides connection to a network of telephone line. Their function is to act as a switching point for temporary connection of local or international calls.) Traditional costing system would simply allocate the equipment cost by the total number of calls processed. However, BT adopts a very complex cost model. It classifies the local exchange equipments according to 3 cost drivers;

- the number of customer lines;
- the volume of call attempts;
- the number of switched calls

Standard costs for the cost groups are calculated and apportioned to appropriate services on the basis of volume data on call attempts, switched calls and customer lines. For costs other than the three cost drivers, they are classified as “fixed costs” which are spread in proportion to the 3 cost drivers. The cost model has been simplified, but its basic principle is very similar to the concept of ABCS: activities and cost drivers.

Sales and marketing expenses are treated by traditional costing approach as a fixed overhead on turnover. But, BT apportions the cost by analyzing the cost by activity and identifying a cost driver associated with that activity. The activities of sales and marketing expenses are broken down into 3 major task forces by BT:

- field sales force
- sales office specific
- sales office general

Fixed sales forces are those front line salesmen. Expenses for field sales force are allocated to services on the basis of estimated time spent on individual services. Sales office specific staffs are those staff specialized in certain specific services e.g. telex, private circuits, etc. The cost apportionment is relatively simple and can be associated with those appropriate services. Finally, sales office general staffs are those staffs who specialize in customer profiles. Most of the expenses are apportioned, based on the number and type of orders they dealt with. Bussey (1993, pp. 40-65) suggests that it is a good example to illustrate how ABCS techniques can be used to analyze costs of products in spite of weaknesses due of insufficiency.

The successful application of ABCS in British Telecom has indicated that ABCS can be applicable to other service sectors such as Banking Sector. Similarly, ABCS should be equally applicable to Nepalese Commercial Banks. In the commercial banking sector, most expenditure is sunk into a fixed overhead, which is shared by most services. A fixed cost is incurred whether customers make visit or not. Direct labour force is only a small proportion of their total operating cost. In addition, due to government's policy to liberalize the market, competition is intensified. Only those who can accurately measure and cut their product/service can survive. ABCS should be one of the proactive tools that assist them to achieve the goals. However, it is found that commercial banks in Nepal have not adopted or fully implemented ABCS.

One of the reasons for not using ABCS is probably that management may consider overhead is not important. According to Garrison and Noreen (1997, pp. 153-169), overhead is defined to be the costs that cannot be easily and conveniently traced to particular cost objects under consideration. It is suggested by

Bussey (1993, pp. 40-65) that accurate allocation of overhead costs is particularly important for service industries such as telecommunications, banking, insurance etc. However, lack of literature about distortion of overhead allocation by traditional accounting system in Nepal may suggest that overhead is not perceived as an important factor in operating decisions for banking sectors in Nepal.

CHAPTER - 4

RESEARCH METHODOLOGY

4.1 Research Design

The research method is an exploratory and descriptive study making use of questionnaires. A draft questionnaire was developed based on comprehensive review of existing literature to conduct a survey. It was circulated to a group of financial and marketing executives of each commercial bank for their opinions and feedback as a part of this study. In order to achieve the objectives of the study, the questionnaire were designed with the intension of answering the research questions.

4.2 Population and Sampling Procedures

The population and sample answering of this questionnaire was targeted on the financial and marketing staff in the commercial banks. It is found that the perception of ABCS depend on the role played by the individuals such as those who present and prepare the report. The reason these individual were chosen is that being information staff, they tend to span organizational boundaries and are in contact with a cross-section of the company's members and can provide the necessary technical and organizational details required for answering the questions. Five employees from each commercial bank, 3 financial executives and 2 marketing executive, were selected as the respondents answering the questionnaire. In that way, 35 employees from seven commercial banks were interviewed.

4.3 Sources of Data

Financial and marketing executives of the seven commercial banks were targeted for this study because they would really benefit from ABCS. The new costing system can assist financial staff to produce accurate product cost and reduce it by analyzing cost drivers of each activity, across the entire value chain. For marketing executives ABCS can help them enhance company marketing intelligence and strategy. The availability of cost drivers can help them identify how individual customer may influence the cost of supply and hence facilitate them to analyses customer profiles. The refined treatment of overhead cost will usually lead them to change product pricing, product mix and marketing policies.

4.4 Data Collection Techniques

The data was collected by means of structured questionnaire with multi-item measures. The questionnaire was classified into three categories that address the objectives of the study.

- Factors that are important to determine advantages and disadvantages of traditional volume based cost management.
- Factors that are important to determine the benefits derived from the implementation of ABCS.
- Factors those are important to determine the problems of adapting and plasticizing ABCS.

Survey questionnaire and interviews were utilized to obtain data concerning the financial and non financial executives perceptions of the disadvantages of the traditional volume based overhead costing, and the benefits of ABCS as well as the reasons for adapting and not adapting ABCS in their companies. The

researcher visited branch offices of commercial banks at Biratnagar to explain the purpose of this research and seek their consent of releasing the names of key financial and marketing executives in the banks.

Section A (importance of overhead allocation in company operational decision) of the questionnaires was used to verify hypothesis 1. Yes/No questions were used to solicit the opinion of targeted individuals on whether overhead information was important in their companies' decision making and whether accurate allocation of overhead was vital in their company operations.

Section B (Traditional Overhead Allocation), Section C (Familiarity with the concept of Activity Based Costing), section D (General Attitude towards Activity Based Costing) and section F (Applicability of ABCS) were used to verify hypothesis 2. Participants were assessed whether they were fully aware of the problems/benefits of traditional volume based costing system as well as Activity Based Costing System.

Yes/No questions were designed in section C to find out whether the surveyed samples had heard of, and were familiar with the concept of ABCS.

In section B and D, participants were asked to respond to question in a five point scale ranging from: 1) strongly agree to 5) strongly disagree, indicating their perceptions towards traditional volume based costing system and the activity based costing system.

Yes/No questions of section F (Applicability of ABCS) were also designed to confirm whether the respondents had misconceptions of ABCS i.e. ABCS was not applicable to banking sector.

In section E, a five –point measurement scale ranging from: 1) strongly agree to 5) strongly disagree were used to verify hypothesis 3. Participants' reasons for adapting or not adapting ABCS in their companies were incorporated.

4.5 Hypothesis Formulation

Consistent with the literature review, the state owned commercial banks in the past may provide a possible reason why overhead has been treated as not important. The guaranteed revenue and profit (due to no competition) may provide less incentive to the management in the industry to accurately allocate overhead. Hence, one of hypothesis for Nepalese commercial banks not using ABCS is given as follows:

Hypothesis 1:

$H_{0=}$ Overhead is not an important factor in firms' decision making.

$H_{1=}$ Overhead is an important factor in firms' decision making.

The second reason for the not using ABCS is that the benefits of ABCS may not be recognized by the executives in the banking industry. Literature review suggests that ABCS was found equally applicable to service industry though it was initially developed in a manufacturing context (Bussey 1993, pp. 40-65; Innes and Mitchell 1997, pp. 190-203). The benefits of ABCS include accurate costing which can lead to better strategic decision for pricing, product mix (Innes and Mitchell 1997, pp. 190-203) and ongoing improvement for process design, productivity and profitability (Cokins, Stratton and Helbling 1993, pp. 23-27). Facing the environment of de-regulation and intensified

competition, a banking sector can use ABCS to proactively improve productivity and profitability. This helps the companies to increase their competitiveness without reducing profit margin. The improved process flow translates also into a better corporate image and customer satisfaction. The lack of documentation about the development of ABCS in commercial banks of Nepal may suggest that managers in commercial banks may not be fully aware of the problems of arbitrary allocation of overhead by traditional volume based costing and the potential benefits of ABCS. The concept of ABCS may particularly be novel to those non-financial executives. But, ever for those financial executives, due to the complexity of the ABCS model as compared to traditional volume based cost management, they may not be fully familiar with the new concept. If the assumption is correct, the result may suggest that more education should be given to executives of the banking sector so as to help them appreciate and eventually use ABCS. Thus, the other possible hypothesis for not adapting ABCS in commercial banks of Nepal can be stated as the following:

Hypothesis 2:

$H_{0=}$ Executives in commercial banks of Nepal are not aware of the benefits of ABCS.

$H_{1=}$ Executives in commercial banks of Nepal are aware of the benefits of ABCS.

The third possible explanation for not using of ABCS may be that cost of using ABCS may outweigh the benefits. Some previous studies suggest that the typical reasons for not using ABCS include employee resistance (Stevenson, Barnes and Stevenson 1996, pp. 25-31), lack of support from top management (Goff 1996, pp. 41-44) and high cost and uncertainty of the benefits of

ABCS. Among these reasons, high implementation cost and uncertainty of ABCS benefits are the most frequently quoted (Corrigan 1997, pp. 51-52; Goff 1996, pp. 41-44). Development and implementation cost for ABCS is huge. When an ABCS system is in operation, it requires virtually an army to identify and classify a company's activities and cost drivers. A small firm may find that the expenditures in the development, implementation and maintenance of an ABCS system outweigh the potential benefits of accurate product costing, ongoing improvement for productivity and better information for company strategic decisions. The possible explanation for not using ABCS in commercial banks of Nepal can be stated as below:

Hypothesis 3:

$H_{0=}$ The cost is not greater than the benefits for Nepalese commercial banks to use ABCS.

$H_{1=}$ The cost is greater than the benefits for Nepalese commercial banks to use ABCS.

4.6 Data Analysis Tools

For data analysis, t-test and $\Re^2$-test are used to evaluate respondents' perceptions or knowledge regarding traditional volume based costing and ABCS and the reasons for adapting and not adapting ABCS.

4.7 Limitations of Research Methodology

Whatever the respondents have answered is believed to be true response and hence, no statistical test has been performed to study non-response bias and the consistency of the individuals' responses. Another limitation of the methodology is that it measures beliefs and not necessarily actions. Foremost, the

survey was conducted in the branch offices of commercial banks at Biratnagar. It doesn't allow generalization to the population. Overall, the versatility in the characteristics of respondents allows the present study to examine the practices of ABCS in commercial banks in Nepal to some extent.

CHAPTER - 5

DATA PRESENTATION AND ANALYSIS

5.1 Personal Profile of the Survey and Interview

Personal profile of the survey and interview is presented in the following tables and described briefly as follows:

Table No. 5.1

Total Years of Working Experience			
Financial Executives		Marketing Executives	
Less than 2 years	15%	Less than 2 years	22%
3-5 years	66%	3-5 years	57%
Over 5 years	19%	Over 5 years	21%
	100%		100%

Source: - Field Survey

Table No. 5.2

Years of Working Experience with the Company			
Financial Executives		Marketing Executives	
Less than 2 years	34%	Less than 2 years	36%
3-5 years	52%	3-5 years	50%
Over 5 years	14%	Over 5 years	14%
	100%		100%

Source: - Field Survey

According to Table 5.1, over 70 percent of both financial and marketing executives have more than 2 years working experience. According to Table 5.2, over 60 percent of financial and marketing executives have been working with their commercial banks for more than 2 years. The result indicates that the participants should be very familiar with their company's operation and the banking sector and therefore are proper samples to be surveyed.

5.2 Study Results Relating to Hypothesis 1

The results of section A presented in Table 5.3 reject the hypothesis that overhead is not important in a company's operation decisions. The mean attitude of both financial executives and marketing executives towards the usefulness of overhead in decision making (Finance : $t=2.75$, $p<0.02$; Marketing : $t=2.51$, $p<0.05$) and the importance of accurate overhead allocation (Finance : $t=2.75$, $p<0.02$; Marketing : $t=1.07$, $p<0.05$) significantly over the median response of yes/no (1,0). These results suggest that, on average, the participants of this research project believe overhead is an important factor in a company's decision making.

Table No. 5.3

T-test results relating to Hypothesis 1

	Financial Executives				Marketing Executives			
Question No.	Mean	Std. dev	n	t-test	Mean	Std. dev	n	t-test
A: Importance of overhead								
1. usefulness of overhead in a company's decision	0.76	0.44	21	2.75[BB]	0.79	0.43	14	2.51[B]
2. Importance of accurate overhead allocation	0.76	0.44	21	2.75[BB]	0.64	0.50	14	1.07[B]

BB Significant at the 0.02 level

B Significant at the 0.05 level

5.3 Study Results Relating to Hypothesis 2

As indicated in Table 5.4, the results also reject the hypothesis that executives in commercial banks of Nepal are not aware of the benefits of ABCS. The study results of section C in Table 5.4 indicate that most of surveyed and interviewed subjects have heard about ABCS (Finance : $t=9.5$, $p<0.01$; Marketing : $t=1.7$, $p<0.1$), but are not very familiar with the concept (Finance : $t=0.21$)

The results of Section B (Traditional Overhead Allocation) in Table 5.4 indicate that both financial executives and marketing executives perceived that traditional overhead allocation to be simple (Finance : $t=-15.81$,$p<0.01$; Marketing : $t=-5.64$, $p<0.01$), cost effective (Finance ; $t=-4.95$, $p<0.01$; Marketing : $t=0.56$) , but inaccurate in product costing (Finance : $t=-3.83$, $p<0.01$;

Marketing : t=-2.22, p<0.05) and inaccurate pricing (Finance : t=-3.51, p<0.01 ; Marketing t=-2.62, p<0.05). However, the two groups have different opinions about the usefulness of traditional overhead costing. Financial executives disagree, that the traditional overhead costing is useful (Finance : t=2.36, p<0.05) whereas marketing executives believe that the traditional overhead costing is useful in spite of its limitations (Marketing : t=-0.69).

The results of section D (General Attitude towards Activity Based Costing System) in Table 5.4 indicate that both financial and marketing groups agree that ABCS is useful (Finance : t=-9.07, p<0.01 ; Marketing : t=-3.71, p<0.01). They perceive the cost techniques are useful in making decision (Finance : t=-6.52, p<0.01 ; Marketing : t=-7.32, p<0.01), reducing non-value added activities (Finance : t=-3.87, p<0.01 ; Marketing : t=-4.19, p<0.01), increasing productivity (Finance : t=-3.53, p<0.01 ; Marketing : t=-2.86, p<0.02) and focusing on company goals (Finance : t=-2.17, p<0.05 ; Marketing : t=-2.19, p<0.05). They also perceive ABCS to be more difficult to apply (Finance : t=5.1, p<0.01 ; Marketing : t=1.07). However, the two groups have different perceptions about the cost effectiveness of ABCS. The finance group perceive ABCS to be less cost effective whereas marketing group is neutral with mean score of 2.93 (Finance : t=2.32, p<0.05 ; Marketing : t=1.44).

The results of section F (Applicability of ABCS) in Table 5.4 find that both groups, on average, believe ABCS is applicable to the commercial banks (Finance : t=4.27, p<0.01 ; Marketing : t=2.51, p<0.05). Only 19 percent of finance executives believe that ABCS is not applicable to the commercial banks for the reason listed below:

1. ABCS is only applicable to the manufacturing industries;
2. Business re-engineering has been introduced to reduce non-value added activities;
3. Companies have limited resources; and
4. ABCS is not cost effective

29 percent of marketing executives believe that ABCS is not applicable to the commercial banks because they believe that ABCS is only applicable to the manufacturing industries.

Table No. 5.4

T-test results relating to Hypothesis 2

	Financial Executives				Marketing Executives			
Question No.	Mean	Std. dev.	n	t-test	Mean	Std. dev.	n	t-test
B: Traditional overhead								
3. usefulness of traditional overhead allocation	3.38	0.74	21	2.36[B]	2.86	0.77	14	(0.69)
4a. Simple	1.33	0.48	21	(15.81)[BBB]	2.07	0.62	14	(5.64) [BBB]
4b. Cost effective	2.19	0.75	21	(4.95)[BBB]	2.86	0.95	14	(0.56)
4c. Inaccurate in costing	2.38	0.74	21	(3.83)[BBB]	2.29	1.20	14	(2.22) [B]
4d. Inaccurate in pricing	2.43	0.75	21	(3.51)[BBB]	2.21	1.12	14	(2.62) [B]
4e. Poor for making decision	3.48	0.81	21	2.68[BB]	3.21	0.97	14	0.82
C : Familiarity with								
5. Heard of the concept	0.95	0.22	21	9.50[BBB]	0.71	0.47	14	1.71
6. Familiar with the concept	0.52	0.51	21	0.21	0.50	0.52	14	-
D : General Attitude								
7. Useful	1.81	0.60	21	(9.07) [BBB]	2.14	0.86	14	(3.71) [BBB]
8a. Simple	3.85	0.75	21	5.10[BBB]	3.29	0.99	14	1.07
8b. Cost effective	3.33	0.66	21	2.32[B]	2.93	0.73	14	(0.37)
8c. Inaccurate in costing	3.86	0.65	21	6.00[BBB]	3.36	0.93	14	1.44
8d. Useful in making decision	2.05	0.67	21	(6.52) [BBB]	2.07	0.47	14	(7.32) [BBB]
8e. Useful in reducing non-value added activities	2.29	0.85	21	(3.87) [BBB]	2.07	0.83	14	(4.19) [BBB]
8f. Useful in increasing job productivity	2.38	0.80	21	(3.53) [BBB]	2.36	0.84	14	(2.86) [BB]
8g. Helpful in focusing on the goals of the company	2.62	0.80	21	(2.17) [B]	2.50	0.85	14	(2.19) [B]
F : Applicability of								
12. Applicability of ABCS to your company	0.85	0.37	21	4.27[BBB]	0.79	0.43	14	2.51[B]

(Figures in the parenthesis indicate negative.)

BBB Significant at the 0.01 level

BB Significant at the 0.02 level

B Significant at the 0.05 level

5.4 Study Results Relating to Hypothesis 3

In Table 5.5, participants' perceptions on the reasons for adapting and not adapting ABCS in their operations are summarized. The results cannot reject the hypothesis that costs are greater than benefits using ABCS in commercial banks of Nepal. This research indicates that only 1 of the 7 commercial banks partially use ABCS for decision making whereas the other 6 commercial banks rely on efficient head count ratio (headcount ratio of the profit centers), square footage (office area occupied by profit centers) or total direct cost in overhead allocation.

As indicated in section E (Reasons for adapting and not adapting ABCS), the reasons for occasional use of ABCS by one of the sample commercial banks are ranked in terms of importance as follows:

1. accurate costing (Finance : $t=-6.0$, $p<0.01$; Marketing : $t=-2.0$);
2. better cost control and profitability (Finance : $t=-6.13$, $p<0.01$; Marketing : $t=0.5$)
3. strategic pricing (Finance : $t=-2.24$, $p<0.1$; Marketing : $t=0.5$)
4. reduction of redundant and non-value added work (Finance : $t=-0.76$; Marketing : $t=1$)

On the other hands, the reasons for not using ABCS are ranked in terms of importance as follows:

1. high application cost (Finance : $t=-11.75$, $p<0.01$; Marketing : $t=-3.46$, $p<0.01$);
2. doubt about whether benefits of ABCS outweigh costs (Finance : $t=-4.75$, $p<0.01$; Marketing : $t=1.75$, $p<0.1$);

3. limited resources to implement ABCS (Finance : t=-4.69, p<0.01 ; Marketing : t=0.76)
4. resistance from other departments (Finance : t=-3.11 ; Marketing : t=-1.73) and
5. lack of management support (Finance : t=-1.38 ; Marketing : t=-1.17).

Table No. 5.5

T-test results relating to Hypothesis 3

	Financial Executives				Marketing Executives			
Question No.	Mean	Std. dev.	n	t-test	Mean	Std. dev.	n	t-test
E: Reasons for adapting or not adapting ABCS								
10a. Accurate costing	1.80	0.63	4	(6.00) BBB	2.33	0.58	3	(2.00)
10b. Government requirement	4.00	1.24	4	2.54	3.33	1.53	3	0.38
10c. Strategic pricing	2.50	0.71	4	(2.24)	2.67	1.15	3	(0.50)
10d. Better cost control and profitability	1.90	0.57	4	(6.13) BBB	2.67	1.15	3	(0.50)
10e. Reduction of redundant and non-value added work	2.70	1.25	4	(0.76)	2.67	0.58	3	(1.00)
11a. Cost concept not important in the industry	4.00	0.61	17	6.73 BBB	4.00	1.00	11	3.32 BBB
11b. High application cost e.g. considerable time in data collection and high cost in building up ABCS module	1.61	0.50	17	(11.75) BBB	1.91	1.04	11	(3.46) BBB
11c. Doubt about whether the benefits of ABCS outweigh cost	2.24	0.66	17	(4.75) BBB	2.45	1.04	11	(1.75)
11d. Limited financial resources	2.06	0.83	17	(4.69) BBB	2.73	1.19	11	(0.76)
11e. Lack of management support	2.65	1.06	17	(1.38)	2.64	1.03	11	(1.17)
11f. Resistance from other departments	2.53	0.62	17	(3.11)	2.50	1.00	11	(1.73)

(Figures in parenthesis indicate negative.)

BBB Significant at the 0.01 level

5.5 Results of ¡ ^{2} –test

$\Re^2$- test was used to examine whether there was a significant evidence of difference between financial executives and marketing executives regarding their perceptions about the importance of overhead information and accurate allocation of overhead in company's decision making. The results of $\Re^2$-test presented in Table 5.6 accept the hypothesis that there was no significant evidence of difference between financial executives and marketing executives regarding their perceptions about the importance of overhead information and accurate allocation of overhead is vital in company's decision making ($\Re^2_{cal}$ = 0.0269, $\Re^2_{tab}$ =6.64 and $\Re^2_{cal}$ = 0.584, $\Re^2_{tab}$ =6.64).

Table No. 5.6

¡ ^{2}-test

Question No.	¡ ^{2} value
A : Importance of overhead	
1. Usefulness of overhead in company decisions	0.0269
2. Importance of accurate overhead allocation	0.584

Significant at the 0.01 level

CHAPTER - 6

SUMMARY AND CONCLUSIONS

The results of this study indicate that, on average, financial and marketing executives believe that overhead is very important in their companies' operational decision making. Consistent with the findings, they also believe that accurate allocation of overhead is vital to business decision making.

In additions, though most participants are not familiar with the concept of ABCS, they have heard about the new cost methodology. Comparatively, more finance executives have heard about ABCS. Both subjects groups' perceptions about the advantages and disadvantages of traditional overhead allocation and the ABCS indicate that they are aware of the problems of traditional overhead allocation and, the benefits of ABCS. Consistent with other studies, they find traditional overhead allocation simple and cost effective, but inaccurate in pricing and operating decision, reducing non-value added activities, increasing job productivity and focusing on the goals of their companies; but, they believed ABCS is difficult to apply. The finance group also feels that ABCS is less cost effective. Nevertheless, both finance and marketing groups indicate that the ABCS is applicable to the commercial banking sector. But, it is interesting to note that some respondents from both groups (19% of financial executives and 29% of marketing executives) believed that ABCS is only applicable to manufacturing industries. As suggested by other documentations, this is a misconception. The benefits of ABCS are equally applicable to the service industry (Bussey 1993, pp. 40-65; Innes and Mitchell 1997, pp. 190-203). Bussy (1993, 40-65) also suggests that the

introduction of ABCS is particularly important for service industry like the banking sector. This pinpoints the need of proper education and training for company executives so they can appreciate the benefits of ABCS. In addition, one respondent has expressed that his commercial bank has used modern accounting system to reduce non-value added activities; thus, ABCS is no longer necessary. But, it should be noted that ABCS is a proactive tool that can support business re-engineering and Total Quality Management (Cokins, Stratton and Helbling 1993, pp. 23-27). Cost analyzed by activities provides creative ways to associate activities with attributes such as value-added content and cost of quality attributes. Non-value added costs can be identified and eliminated. Value added processes can be compared and evaluate in terms of their rupees amount as well as value content. Activities and attribute data are used to reengineer business processes and therefore should complement business re-engineering.

This study has found that there is no significant difference between finance and marketing groups' perception about the merits and limitations of traditional overhead allocation and ABCS. It may be explained by the fact that job rotation is popular in many commercial banks in Nepal. Some marketing executives are transferred to Finance department. In additions, commercial banks have a well training program to raise the cost consciousness of Marketing Department. On the other hand, it is not surprised to note that more financial executives have heard of ABCS as curriculum of Management Faculty of all universities in Nepal has incorporated ABCS in accountancy subject. It is also not surprising to note that financial executives are more inclined to think that traditional overhead allocation is simple while ABCS is difficult and not cost effective. Since they are close to cost

data and better knowledge about costing, they are in a better position to asses the development and implementation cost of ABCS.

In the study, only one of the seven commercial banks in Nepal is partially using ABCS in their operations. Accurate costing, better cost control and profitability, strategic pricing and reduction of redundant and non-value added work are cited as the main reasons for occasional use of ABCS in their operations. Consistent with prior studies, high application cost, doubt about the potential benefits and limited support resources are major reasons for not using ABCS. Other reasons for not using ABCS include the lack of management support and resistance from other departments. More than 50 percent of the respondents did not answer when their companies will adopt ABCS. It indicates that they are not sure whether their companies will adopt ABCS in near future. Approximately 30 percent of the participants believe their companies will adopt ABCS within 5 years. Less than 5 percent of the subjects believe their companies will consider ABCS only after 5 years whereas less than 10 percent of the subjects believe their companies will not consider ABCS in the foreseeable future.

CHAPTER - 7

LIMITATIONS OF THE STUDY AND RECOMMENDATIONS

The results of the study, based on one industry (banking) and two functional departments (finance and marketing), may be limited. Future studies should be carried out to incorporate the opinions of other functional departments such as human resources and top management to be more conclusive. It is also suggested that future studies should be extended to other industries such as telecommunications, insurance, manufacturing for inter-industrial comparisons. Furthermore, since the samples are small and not selected randomly, it may not be representatives of the population. Caution should be made to the interpretation of the survey data. A larger sample size selected on a random basis should be considered in future studies.

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APPENDIX

SURVEY INSTRUMENT

Section A: Importance of overhead in company's decision

1.	Do you think overhead information is important in you company's decision making?	Yes	No
2.	Do you feel accurate allocation of overhead is vital in you company's decision making?	Yes	No

Section B: Traditional overhead allocation

Traditional overhead allocation is to allocate company overhead by applying a single plant-wide/company-wide overhead rate to some identifiable measure of activities such as total direct cost or total labor cost. For example, if a company has overhead rate of 40% and a product has incurred total direct cost of Rs. 30,000, the product will absorb overhead cost of Rs. 12,000. The assumption underlying the traditional accounting approach is that all overhead resources are consumed by products at the same rate.

		Strongly Agree				Strongly Disagree
3.	In your opinion, traditional overhead costing is useful:	1	2	3	4	5
4.	In your opinion, the information produced by traditional (old) cost management systems is:					
a.	Simple	1	2	3	4	5
b.	Cost Effective	1	2	3	4	5
c.	Inaccurate in Costing	1	2	3	4	5
d.	Inaccurate in pricing	1	2	3	4	5
e.	Poor for making decision	1	2	3	4	5

Section C: Familiarity with the Concept of Activity Based Costing (ABC)

5.	Have you heard of the concept of ABC?	Yes	No
6.	Are you familiar with the concept of ABC?	Yes	No

Section *D: General* Attitude towards Activity *Based* Costing *(ABC)*

Rather than utilizing a single rate in overhead allocation as in traditional overhead allocation approach, Activity Based Costing disaggregates overhead resources into a series of cost pools and several allocation bases. The cost assignment involves two-steps 1) Identify all activities (e.g. purchasing, maintenance and quality control) that are performed to make products and assign resources to the activities. 2) Assign each activity cost to cost objects, such as products or customers, based on their use of activities. The calculated output cost reflects the underlying patterns of activity by outputs. For example, products that require more or less setup time, data processing or engineering supports absorb more overhead cost.

		Strongly Agree				Strongly Disagree
7.	Do you think Activity Based Costing is useful:	1	2	3	4	5
8.	In your opinion, the information produced by Activity Based Costing Management system is:					
a.	Simple	1	2	3	4	5
b.	Cost Effective	1	2	3	4	5
c.	Inaccurate in Costing	1	2	3	4	5
d.	Useful in making decision	1	2	3	4	5
e.	Useful in reducing non-valued added activities	1	2	3	4	5
f.	Useful in increasing job productivity	1	2	3	4	5
g.	Helpful in focusing on the goals of the company	1	2	3	4	5

Section *E:* Reasons for *adopting or not adopting* ABC

9. In allocating company overhead, which of the following costing approach your company is using?

a. Traditional Approach of overhead allocation - a single company-wide overhead rate (based on total direct cost)

b. Traditional Approach of overhead allocation - a single company-wide overhead rate (based on total labor cost)

c. Activity-based costing

d. If other, please specify _____

Please answer either Question 10 or 11 only. If your answer is "c" in question 9, please answer Question 10. Otherwise, go to Question 11.

		Strongly				Strongly

		Agree				Disagree
10.	Please consider each of the factors listed below for the reasons for adopting ABC in your company:					
a.	Accurate Costing	1	2	3	4	5
b.	Government Requirement	1	2	3	4	5
c.	Strategic pricing	1	2	3	4	5
d.	Better cost control and profitability	1	2	3	4	5
e.	Reduction of redundant and non-value added work	1	2	3	4	5
11.	Please consider each of the factors listed below for the reasons for not adopting ABC in your company:					
a.	Cost concept not important in the industry	1	2	3	4	5
b.	High application cost e.g. considerable time in data collection and high cost in building up ABC module	1	2	3	4	5
c.	Doubt about whether the benefits of ABC outweigh its cost	1	2	3	4	5
d.	Limited financial resources	1	2	3	4	5
e.	Lack of management support	1	2	3	4	5
f.	Resistance from other departments such as sales, product, marketing or engineering	1	2	3	4	5
g.	If other, please specify: _____					

Section F: Applicability of ABC

		Yes	No
12.	Do you think ABC is applicable to your company?		

If the answer to Question 12 is 'No'', please specify the reason(s):

_____

_____

_____

Section G: Implementation of Activity Based Costing

Please answer Question 13 only if your company has not adopted ABC yet.

13. Will your company consider using ABC in cost management? Yes No

14. If your answer to Question 13 is "yes", when will your company use ABC?

a. Within a year **b.** 2 - 5 years **c.** 5 years later **d.** Will not consider

Section H: Personal Background

15. How many years of working experience do you have?
a. Less than 2 years **b.** 3 - 5 years **c.** Over 5 years

16. What department are you currently working?
a. Marketing **b.** Finance **c.** Other: Please specify:----------

17. How long have you been working with the company?
a. Less than 2 years **b.** 3-5 years **c.** Over 5 years

Name of the Respondent :----------

Organization:----------

Designation:----------

Thank You for 'The Co-operation'