

CHAPTER - I

INTRODUCTION

1.1 Background

The world is familiar through information technology. On this way our commercial banks are also using huge mass of computers to make easy work. And the important of Information technology going on. This Nabil Bank is also using IT. NABIL Bank commenced operations 26 years ago, on the 12th of July 1984 through a joint-venture with Dubai Bank Ltd marking a turning point in the banking history of Nepal. Banking has been redefined and service remodeled since then. Banking thitherto suffered setbacks and the commencement of NABIL Bank introduced new philosophies and best practices to the industry. This in essence opened up a plethora of opportunities for all: entrepreneurs, industries, individuals for better future. Commencing with a team of about 50 staff and Rs.28Millions as capital professional banking evolved thru NABIL in Nepal. The arrival of Nabil Bank in Nepal on the 12th of July 1984through a joint venture with Dubai Bank Ltd. under a Technical Service Agreement (TSA) marks a new dawn in the Nepalese banking industry. What is more admirable is with the opening of then Nepal Arab Bank Ltd, Customer Service or marketing took a U-turn. That in substance accelerated the evolution in banking products and services thereafter in Nepal. The 26th year of operation has proved that it has through its past progressions and through different phases in the banking industry achieved two things we can take pride in: first it has a large clientele base and supportive stakeholders, secondly, it has succeeded in positioning itself robustly in the market for which the credit goes to Team Nabil. Today the Bank has established itself as the Bank of 1stChoice. We are the largest bank in terms of the network and number of branches amongst the commercial banks with a wide network of ATMs and offerings including a range of diversified service products.

We have a number of domains in our precedence of excellence that mirrors where we stand in the market. In this span of 26 years of banking operation Nabil has already distributed rich cash dividends, spectacular returns on asset and equity even during the most trying times. All of which endorses the strength and drive with which Nabil

proceeds. We, in order to make our presence felt in every walk of life and serve people across all social strata and segments, have expanded our network by adding 6 more branches that totals to 47 points of representation in the nation. We have diversified our realms of business in the interests of our customers and are also being inspired by the noble cause of adding value to economic development. We have multiple sectors in focus to serve host of entrepreneur's as our new strategies are to expand dynamically, exploring new avenues and opportunities. We thus have packaged our service products into well a diversified range consisting of corporate banking, trade finance, along with consumer and retail banking services specifically, card products, microfinance and the like to reach out to the masses. We have teamed together, built on our strengths, taking larger strides as we Surge Ahead Faster – Further together in the years ahead to be the 1st Choice Provider of Complete Financial Solutions of all our stakeholders.

Nabil Bank Limited had the official name Nepal Arab Bank Limited till 31st December 2001 and then after it is widely recognized as Nabil Bank since 1st January 2002. It has been awarded by the “BANK OF THE YEAR-2004” award which is published by Financial Times on the publication of “The Banker” magazine. This award is given to that bank which has contributed to great effort to its customer providing quality services.

NABIL is the pioneer in introducing many innovative products and marketing concept in banking sector of Nepal with 17 branches and 2 counters in all major cities. It is the only Bank having its presence at Tribhuvan International Airport, the only international airport of the country. In addition, the number of outlets in the country is the highest among the joint venture and private banks operating in Nepal. Success of NABIL is a milestone in the banking history of Nepal as it paved the way for the establishment of many commercial banks and financial institutions. The bank is well known for providing highly personalized service to its customers and has launched its operation with a market concept “customers are the king in the market”. Nabil started Nabil Bank Limited knocking at the door of customers breaking the trend of Nabil Bank Limited knocking the door of bank. NABIL Bank has 250 correspondent relationships besides numerous dreaming arrangement 75 banks in 40 countries of the world.

NABIL has a clear corporate philosophy of its own. It surges forward with clarity of vision, mission and value. While it has its short-term goals and objectives the focus is its long-term vision in society in the interests of all of its stakeholders that comprises of the shareholders, the staff, customers and the community it is an integral part of. That has in substance enthused us to do things differently with new strategies in the market to be the 1st choice provider of complete financial solutions of all our stakeholders. NABIL provides a full range of commercial banking services through its outlets spread across the nation and reputed correspondent banks across the globe. Moreover, NABIL has a good name in the market for its highly personalized services to the customers.

Principal Activities

NABIL has been a pioneer in introducing modern banking and numerous innovative products in Nepal. It also was the first to introduce consortium finance in Nepal and has had the privilege of rendering comprehensive banking services including trade finance to leading government institutions like Nepal Telecommunications Corporation, Nepal Electricity Authority, Nabil Bank, Nepal Television, Water Supply and The Royal Nepalese Army. By virtue of the range of services provided by the Bank and its strength in the market, NABIL is also a significant player in financing entities involved in various infrastructure projects.

The bank is a major player in facilitating import export activities with modern and efficient Trade Finance and International Trade Support Services, to the large Multinationals as well as established Business conglomerates in the Private Sector. NABIL Bank ranks among the top three financial Institutions in Nepal in terms of its market share of handling Nepal's Trade.

NABIL is the sole banker to a multitude of International Aid Agencies, non-government organizations, Embassies and Consulates in the Kingdom. The Bank has a dominant market share in these customer segments, which is a compliment to its image and servicing capabilities.

1.1.1 Management Information System (M.I.S)

Information processing system that generates, consolidated or summary reports or comparative methods to facilitate the decision maker of tactical level is called management information system. Management Information System is the combination of three words; management, information, and system. Shortly it is known as MIS. It is a systematic of organized way of providing informational support to managerial functions of an organization so to keep them up to date about the changes in the environment. It is a structured system of interrelated and interdependent groups of components; computer hardware, software, manual procedures, models for analysis, planning, control, and a database and decision-making. MIS is an organized or planned effort and not the result of some sporadic attempts. The primary function of MIS is to provide information. MIS is a facilitating or supporting system to aid managerial functions and not merely help operational tasks, that is, the MIS provides information that assists managers at different levels in the organization. MIS is formed from a number of components, including hardware, software, manual procedures, models, and a database. MIS is a system of users and machines, the users are as important to the system as the machines.

"MIS is defined as integrated system of man and machine for providing the information to support the operations, the management and the decision making function of the organization." The primary function of MIS is to provide accurate, timely and right information to the decision-makers. There are some features for the appropriate MIS. MIS is an organized or planned effort and not the result of some sporadic attempts. The primary function of the MIS is to provide relevant information that assists managers at different levels in organization in decision-making. MIS is form from number of components including hardware, software, manual procedures, models and a database. MIS presents information in current, usable and easily understandable format. MIS is a system of users and machines. The users are as important to the system as are machines.

Benefits of M.I.S

M.I.S facilitates -decision making process by furnishing information in proper time frame. This helps the decision maker to select the best course of action. It supports

decision making in both structured and unstructured problem environment. It provides requisite information at each level of management to carry out their function. It helps in highlighting the critical factor to closely monitor for successful functioning of the organization. M.I.S provides system of people, computer, procedure, interactive query facilities, document for collecting, storing, retrieving and transmitting information to the users.

1.1.2 Introduction to Electronic Card Payment System

Many techniques of electronic payment like ABBS, ATM, SWIFT, INTERNET BANKING, TELEBANKING, CARD BANKING ,ETC..., Among the many 'firsts' credit goes to NABIL Bank, the business of Debit cards Issuance and Acquiring is one. It introduced Master Card to the Nabil Bank is strong in electronic payment system among others banks. It has Nepalese market, in Nepalese Rupees and US Dollars and introduced the Visa Electron Debit Card. Growing network ATM facilities are available to account holders. Debit Cards with Pin numbers are issued to enable customers to avail of 24-hour ATM facility. NABIL Bank is going to introduce DEBIT CARD ATM in different outlets and other 250 correspondent banking relationships and has drawing arrangements with banks in 47 countries.

Cards & ATMs

- **Credit Card:** MasterCard Local MasterCard International VISA Local Diners Card For Travel (Against Passport Facility).
- **Debit Card:** VISA Electron ATM Card
- **Nabil Prepaid/ Nabil Koolcash Card:** Overviewed where can I use the card? Why Nabil Prepaid FAQs

Other Electronic Payment Services are as follows:

Acquiring Business can be overviewed as Nabil Bank is the pioneer in introducing credit cards in Nepal. We are a principal member of Visa and MasterCard International since early 1990. Nabil Bank is proud to be the bank having the widest range of services in cards which includes acquiring of all kinds of cards under Visa and MasterCard brands.

We also acquire Diners Cards being a sole agent for the country and have arrangement of POS sharing with American Express Cards. Similarly, we issue the widest range of credit and debit cards under the brands of Visa and MasterCard to our account holders as well as non-account holders. Nabil Bank has the state of art technology in cards to provide online services.

Card Products

Nabil today stands on the forefront in card services in Nepal, providing an array of card products like Credit cards, Debit cards and Prepaid cards in world renowned brands like Master Card and Visa card. Nabil Master Card and Nabil Visa Card can be used in Nepal and India in over 350,000 outlets for purchases and in more than 40,000 ATMs for cash withdrawals. Nabil issues international card in Master Card brand.

Nabil MasterCard International is accepted in more than a million ATMs and outlets all over the world. Nabil credit cards have flexible repayment options whereby a cardholder can choose to pay any percentage starting from 10% to 100% of the due amount, giving great comfort in managing their cash flow. Nabil Bank offers Nabil Visa Electron Debit and Nabil Prepaid Card. Both Nabil Visa Electron Debit Cards and Nabil Prepaid Cards are hassle free, readily available and simple to use. These cards are also accepted for purchases at Point of Service (POS) and for cash withdrawals from ATMs in both Nepal and India. There is no charge on use of Visa Electron and Prepaid cards for cash withdrawal from Nabil ATMs and for purchases through any outlets across Nepal and India. In line with Bank's effort to promote card uses in all segments of the society, Nabil Miss Player Visa Electron Debit Card, a co branded card has been launched for women account holders of the Bank. Nabil has been the pioneer in increasing acceptance of cards as payment means in the country. For a single Bank in Nepal, Nabil has one of the largest networks of 49 ATMs and more than 1200 POS terminals at locations spreading across the country from Birtamode to Mahendranagar that accepts, range of card brands like MasterCard, Visa, Maestro, Cirrus, Visa Electron, Visa Plus and SCT Cards. Nabil also provides service of online payments through cards from its Card Division and selected branches enabling customers to make payments like test registrations, membership fees, purchase of books, journals etc.

E-Banking

In keeping with our commitment to be the "Bank of 1st Choice" Nabil Bank is constantly moving towards enhancing customer services by providing enhanced products and services. Along the same line, we are pleased to provide you with NabilNet, our Internet banking system (online banking), NabilTele, our telephone banking system.

i) NabilNet: Through a computer connected to the Internet, you can log on to the NabilNet site and do various banking transactions from the comfort of your house or office.

The features of NabilNet are as follows:

- **Fund Transfer:** You can transfer your funds from your account to any other account in Nabil Bank. All Nabil branches are connected to the centralized database through VSAT link and use state-of-art, world-renowned software.
- **Statement:** You can view, download or print your statement at your convenience.
- **Balance Inquiry:** You can view your balance at any time.
- **Cheque Status:** You can enquire/confirm which of the issued cheques are paid by the bank and which are not.
- **Access:** You can access all your accounts under your customer ID for balance enquiry, fund transfer, statement etc.
- **Email:** You can send emails to your relationship manager for banking services or follow-ups in a secure environment.

ii)NabilTele :Through a telephone, you will be able to obtain your balance.

Internet Banking Service

For customers who do not wish to leave the comfort of their own home or office simply for account information and fund transfer, the Bank offers 'NabilNet', an internet banking solution through which customers can view their account information and even transfer funds, in a secured environment.

SME Banking

SME business segment of Nepali economy which offers banks the opportunity to extend financing to a wide range of businesses; Nabil Bank has also been focusing on SME to boost up their performance and capacity. All small as well as medium size businesses are given due attention and support to enable them to perform better. With this objective in mind and as envisaged by the Five Year Strategic Plan (2008-2013) of the Bank, SME Banking and Microfinance Unit was set up on 15 August 2008 and it is successfully operating as a key Strategic Business Unit of the Bank since then. The loan business volume of the Unit registered a growth of 58.3 percent since the establishment of the Unit achieving loan outstanding of Rs. 3,727 million as at year ended on mid July 2009 from Rs.2,355 million as at Mid July 2008. “SME Banking Center” was established in May 2009 in new premises at New Baneshwor, Kathmandu which is also shared by the Bank’s New Baneshwor Branch, enabling us to provide better service and ambiance to all our valued customers. The Center is working as a hub for entire branches throughout the country that are doing SME Business. The Unit is also sourcing deposit resources and providing deposit related services and catering to clients both existing and new – the entire finance facilities in packages or as required. The finance product offered by SME Banking unit is tailor-made to suit the needs of diverse clientele, be it for trading, services business or for small to medium scale industrial units.

It also caters to travel and tours business, education and health related services, and professional people for related services. The package includes cash credit, overdrafts, time loans/import loans for managing the working fund and term loans for acquiring or enhancing fixed assets such as plant, equipment/ machinery, premises and vehicles etc. The flexibility of finance and the prompt and dedicated service together with practical advice where necessary, extended to our customers has made the SME finance product the most preferred mode of finance to them. A team of highly trained and dedicated relationship managers based at the SME Banking Center and at various branch locations spread across the country to take care of customers’ financing needs in today’s dynamic business scenario. Customers can approach any of our relationship managers based in any branch across the country and expect to get a uniform level of fast and delightful service.

SWIFT

Nabil is a member of Society for Worldwide Inter Bank Financial Telecommunication (SWIFT). This is a service, which facilitates in the efficient and speedy fund transfers and messaging through e -mobile. Draft and SWIFT Transfers in Indian Currency and Foreign Currency: Nabil Bank has established correspondent relationship with renowned banks in India and abroad for catering fund transfer needs of its customers.

SWIFT Transfer through the SWIFT transfer mechanism, we can transfer your fund to virtually anywhere in the world. Likewise we can receive the fund for your account with us from virtually any bank in the world. SWIFT stands for Society for Worldwide Interbank Financial Telecommunication System, which is a reliable communication network speeding up fund transfer and other financial messages. You do not need to have an account with Nabil Bank for fund transfers through SWIFT.

E-Remittance Products

Nabil has been committed to provide top-notch services to its customers through its remittance products:

Principal Bank Agent for rendering (**Qatar, Doha**) any of the Nepali workers in Qatar can send the fund to their recipient / beneficiary through E-remittance. This product has been established in a tie-up with Doha Bank, Qatar to facilitate transfer of workers' funds into the country.

Western Union Money Transfer

Nabil Bank is the only Principal Bank Agent for rendering Western Union Money Transfer services. In order to provide the service throughout the country, there are over 750 authorized sub-agent locations of Nabil Bank in different parts of the country. Nabil is the sole Principal Agent Bank on Nepal of Western Union Financial Services and facilitates transfer of funds, through an on-line computer system, instantly to or from more than 170000 locations in 196 countries and territories.

Nabilremit

Nabil Bank also provides domestic remittance services for money transfers from one place to another place in Nepal. There are over 600 NABILREMIT agents established in different parts of the country for rendering the domestic money transfer services.

Service Culture

Nabil Bank's policy is to extend quality and personalized service to its customers as promptly as possible. All customers are treated with utmost courtesy as valued clients. The bank, as far as possible, provides tailor made facilities to its client, according to the unique needs and requirements. To give more efficiency and priority to its customers, Nabil has been adopting innovative and latest banking technology. It helped the Bank constantly improve its service level and kept it prepared for further adoption of new technology.

Banking Technology

NABIL has very strong and exclusive network branching system within the Kingdom. It is the first bank in Nepal to introduce modern computerized services. It has ABBS (Any Branch Banking System) which facilitates cash and cheque transaction from any of the NABIL Branches within the valley. It has its own accounting software system called "NAB SYSTEM". It provides telebanking facility to its customer and other branches. It also has an esteemed and extensive correspondent/agency banking relationship with most of the leading banks of the world like Citibank, Amex etc. It also provides International level of services. So, Nabil Bank's Banking technology is computerized and of quick service.

In keeping with the Bank's tradition of providing superior services to its customers as well as to increase its shareholder's return on investment in the long term, NABIL has already commenced the implementation of a world class banking software developed by a renowned software company. With the activation of this system in all the branches by April 2004, the Bank will be able to further enhance its operating efficiency and offer customer data access and offsite services equal to that offered anywhere.

1.2 Focus of the Study

The major problem with debit cards is that the people are not familiar about its significance and its use.

- To determine the major problem of cards users through e-payment system.
- To make feel people fast and easy and save time by using cards.
- To aware the people in future or make familiar of ATM.
- To know how MIS work practically for card management.
- To know the relation between forecasting model and MIS.

1.3 Statement of the Problem

NABIL has very strong and exclusive network branching system within the Kingdom. It is the first bank in Nepal to introduce modern computerized services like ABBS (Any Branch Banking System) which facilitates cash and cheque transaction from any branches.

- Study of previous information system of card management
- Analysis of electronic payment system.
- SWOT analysis for New DFD
- Application of new technology
- Cost benefit analysis for suggested strategy

1.4 Objective of the Study

Despite of the popularity of the debit cards, most people do not have good knowledge about the utilities of the debit card. Therefore, the purposes of the study on NABIL Bank Ltd. debit card are as follows:

- To know the existing electronic card payment system of NABIL Bank Ltd.
- To develop forecasting model of debit card holder of Nabil Bank Ltd.
- To find out the risk associated with e-card.
- To evaluate how MIS supports in decision making in the NABIL Bank Ltd.
- To Recommend the NABIL to install the new proposed (Cash Deposit) system.

1.5 Rational of the Study

The Rational of the study are as follows:

- The report is prepared for the partial fulfillment of the requirement for the Master of Business Studies.
- It helps to get actual information about the performance of the bank relating to debit cards.
- It helps to develop the communication skills of the students, which may be helpful in their career path
- It helps to train the students for administrative and managerial functions
- It helps to gain practical knowledge about the debit card transaction of Nabil bank limited.
- It helps to enable the students for accessing the source of the information required by them.
- It helps to make students capable of tackling the problem faced by them during the entire course of making report.
- It helps to gain experience about the fieldwork process.

1.6 Limitation of the Study

This study has been conducted with certain limitations. Some of them are as follows:

- This study is limited to the activities of the Nabil Bank regarding the debit card transaction only.
- This analysis is based on the available data and this report is based on primary and secondary data.
- Lack of time and insufficient resources is one of the basic limitations of the study.
- The performance analysis of debit card is based on only 5 years.
- This study may not represent the true picture of the bank as it has covered only a limited area.
- The study has been conducted considering only a single dimension i.e. bank without giving much more concentration on either sides of the debit card.

1.7 Organization of the Study

The organizations of the Study are divided in five chapters which are mention as follows.

Chapter- I

Introduction is the initial chapter of this research .The first chapter is Introduction of the NABIL BANK LIMITED having seven subchapters includes Background, Introduction to MIS, Focus of the Study, Statement of the Problem, Objectives of the Study, Significance of the Study, Limitations of the study and Organization of the Study.

Chapter – II

Review of Literature is second chapter that start after the introduction of the study which studies theories and practices. The conceptual Framework of this study which gives overall concept, review form journals and articles that studies some journals and articles relating to the study and last one review from previous thesis that reviews the thesis done in the relating subject are the main components of this chapter. Literature Review is most important part for the study of this research which gives the knowledge about how people mark right decision and quick decision from the Nabil Bank Limited.

Chapter – III

Research Methodology is the most important chapter .The third Chapter is Research Methodology. The chapter has shown the Research Design, Sources of Data, Data Collection Technique, and Data Processing, Tools used for data analysis (E-R Diagrams, DFDs, and Flow Chart) etc.

Chapter – IV

System Analysis, Design and data Presentation is fourth chapter that come after the research methodology. This chapter presents all the data available and analyses it using different analytical tools. It deals with the facts found in the organization in organized and sequential manner. E-R diagram showing multiple entities of the system, their relationship with each other and their attributes are analyzed and described. To enhance understanding of data flow, contest level data flow diagram and zero level data flow

diagram is presented. The chapter also illustrates the current position of the Information Technology in Nepal, the government policies and available infrastructure facilities about the electronic payment system.

Chapter – V

The final or last chapter of the study is Summary, Conclusion and Recommendation of the case study. Summary of the research, the conclusion that the researcher found in the research period and the recommendations for the betterment of the system are included in this chapter

CHAPTER - II

LITERATURE REVIEW

In the chapter review of literature, we review the previous literatures developed in the related subject and topic, previous thesis, articles, journals etc. are reviewed. From it, one should come to know that my topic on problem of research is new one or not, what concepts or ideas have been already found, what type of modification is necessary to the deficiency if it exists to the research etc. Thus, it is essential to develop concepts, Information or ideas about the selected topics by studying the relevant materials.

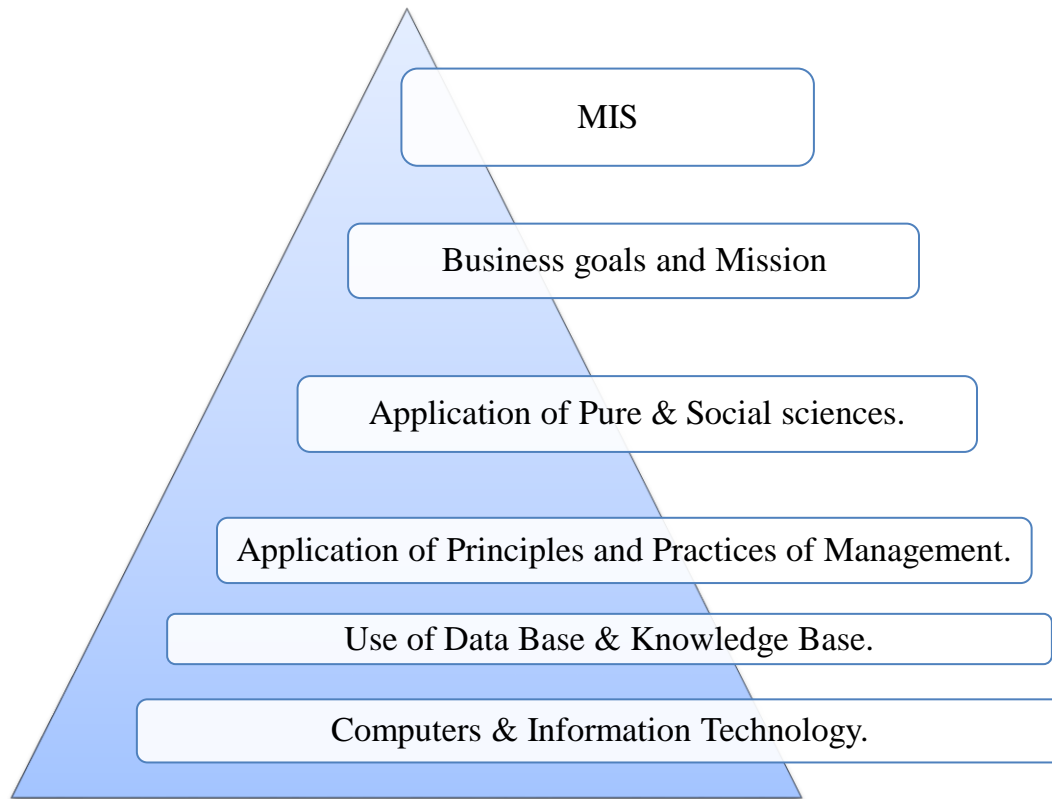
2.1 Conceptual Review

Management Information System (M.I.S)

Management Information System (MIS) is that systems that helps to collect information and generate consolidated and comparative reports to facilitate decision making. System that integrates management and information system (hardware, software, database etc.) is called MIS. It is a tool that provides right information at right time to do right decision on the instruction. MIS is the systematic management of information for managers, usually centered on computer technology to permit rapid and accurate processing, storage, and retrieval of information. It is a system that provides periodic, predetermined, and ad hoc reporting capabilities. It is defined as a network of data processing procedures developed in an organization and integrated as necessary with manual and other procedures for the purpose of providing timely and effective information to support decision making for planning, directing and controlling the activities for which they are responsible and other necessary management functions. It can be viewed as a systematic process of converting data from internal and external sources into information and to communicate that information, in an appropriate form, to managers at all levels in all functions to enable them to make timely and effective decision, to support policy analysis and other long range efforts. It involves systematic procedure for the generation, storage and retrieval of data on operations of an

organization and the availability of that data for strategically planning and decision making.

Figure 2.1
Conceptual View of MIS



The above figure has shown the conceptual view of Management Information System (MIS). From the bottom hierarchy system, operational parts identify the computers and information Technology. After that Use of Data Base and Knowledge Base, Application of principles and practices of Management after that Application of Pure & Social Sciences. Application of Pure and social sciences is one of the most important strategies for rational decisions. Beyond the top level Information system Business goal and mission play vital role. At last at the top part MIS consists

Major Roles of MIS in an Organization

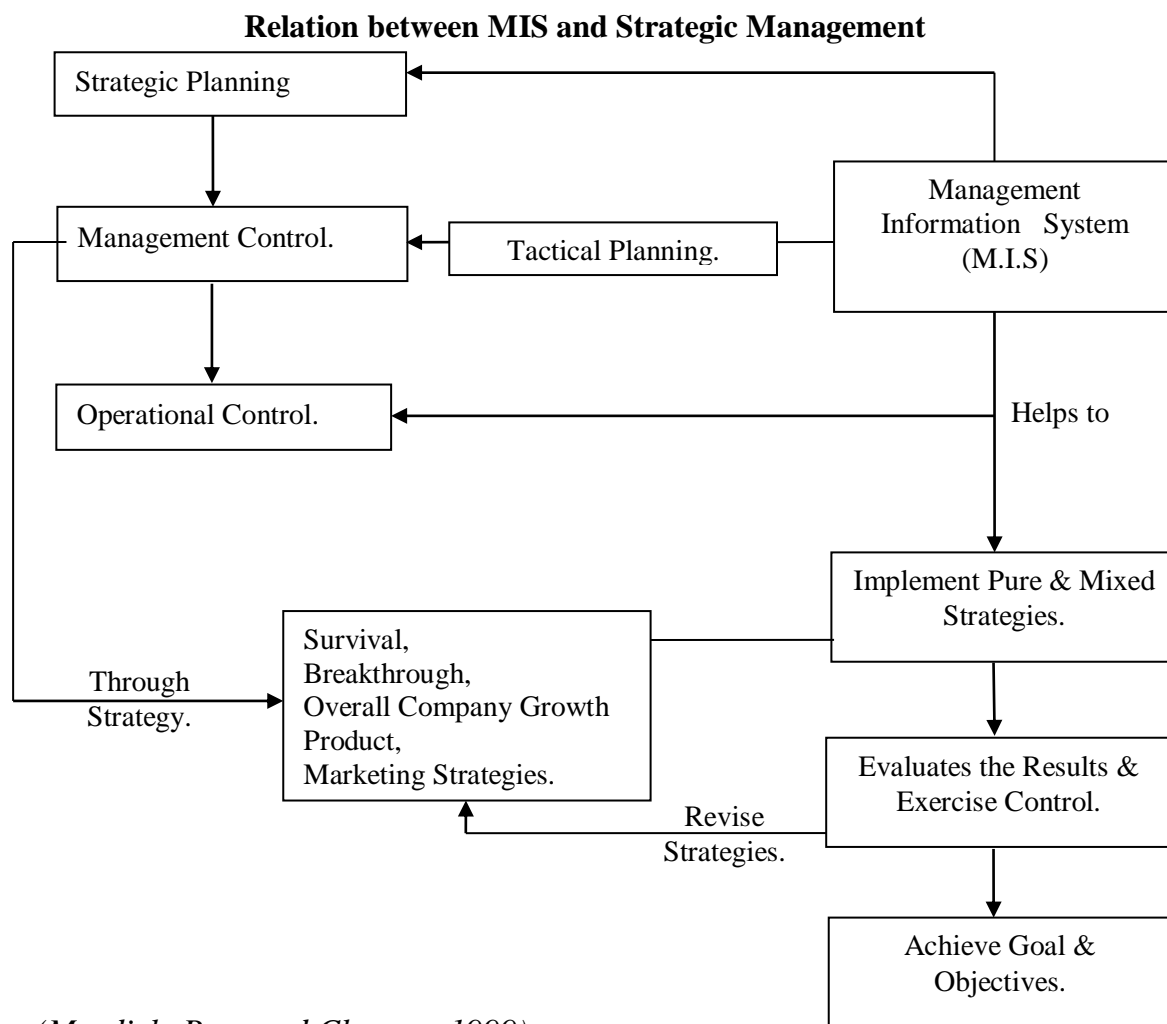
MIS helps in various systems. i.e., Query system, Analysis system, Modeling system and DSS etc. MIS helps in strategic planning, management control, operational control and transaction processing etc. MIS plays the role of information generation, communication,

problem identification and the process of decision making. MIS helps in management, administration and operation of the organization.

Relation between MIS and Strategic Management

First, it requires an understanding of the business problem that is trying to solve. Second, it requires an understanding of available technologies to know which ones to use in designing a creative solution for the business problem. This is why studying MIS is so important; MIS emphasizes both business process and technical solution.

Figure 2.2



(Murdick, Ross and Claggett; 1999)

Interpretation

In the above diagram clearly shows that how the Management Information System helps in developing Strategic Management to achieve Goal & Objectives.

Importance of MIS; Strategic Management and Decision Making

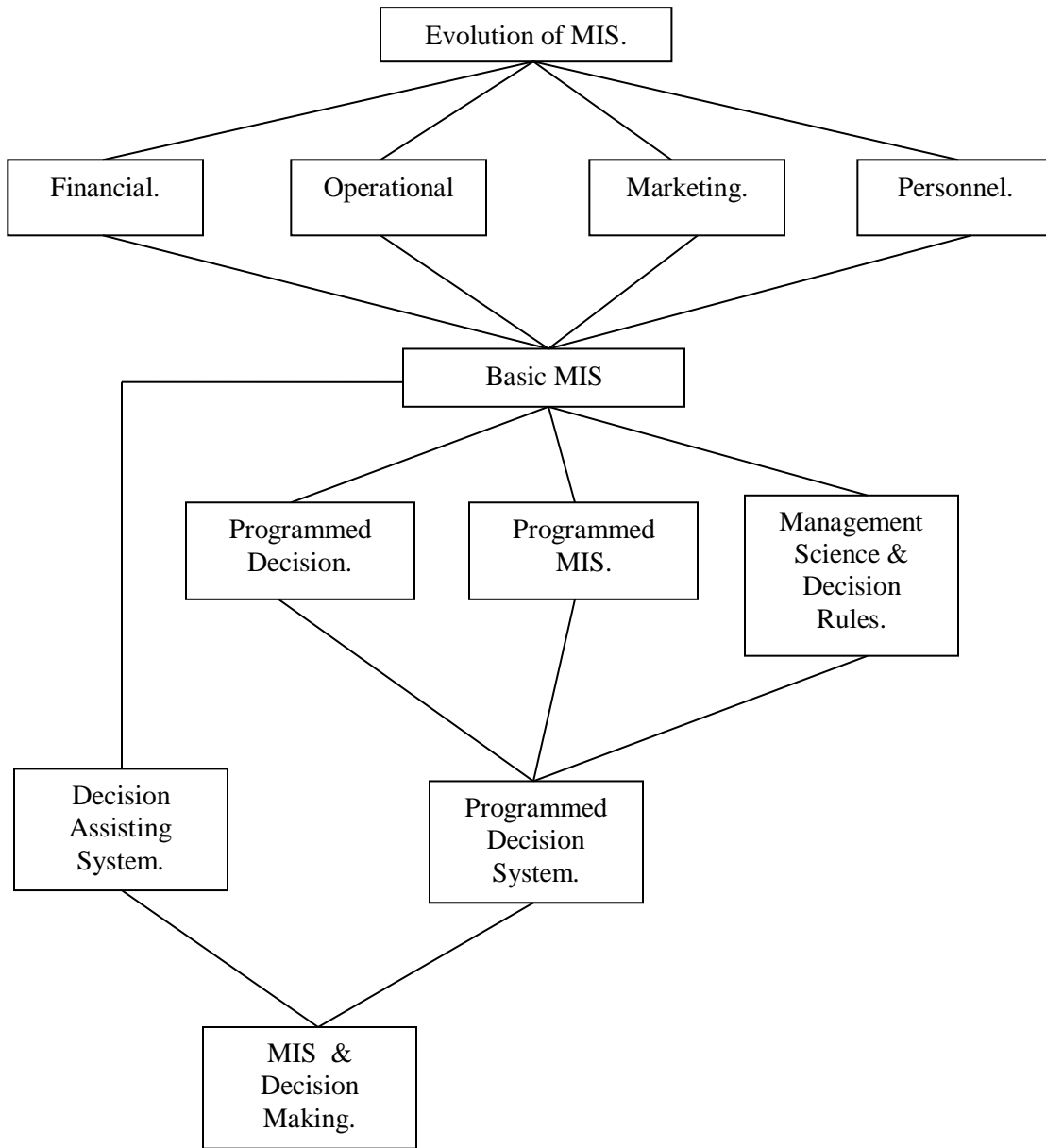
Today Nepal too had become the full member of WTO (World Trade Organization) and is talking about the globalization. In today's world any identity cannot remain untouched from the other corner of the world as which is directly or indirectly been influenced. As we too are talking about the free trade area, it has been very competitive world and one has to increase its efficiency to compete. Multinational company has started flowing in Nepal which is equipped with latest technology, qualified manpower. To compete with the domestic as well foreign industries and to survive in this competitive world one has to change is present structure. The fast changing scene of liberalization and globalization a management job has become very complex. And do make any decision, one has to take the up to date and timely information either it may be internal or external. It has become very complex task to come in the decision. To overcome this management need to be updated with right information at right time to make the effective decision.

It is understood that information is compared with the blood of the human body whereas MIS is a heart. In the body, the heart supplies the blood to all the part of the body which carries the oxygen and other vital ingredients to each and every cells of the body without which it cannot remain alive even a minute. Upon, requirement the heart pumps faster and supplies more blood when needed. It regulates and controls the incoming impure blood process it and again resend to the part of the body.

The MIS plays the exactly role in the organization which is a must for a management to make righty decision in righty time. MIS provisos relevant information which helps the management for implementation to different business strategies and objectives and helps management to use the different strategies which present industry needs.

MIS helps in strategic planning, management control, operational controls and decision making. Regular supply of information is imperative to assess the present market opportunity and threats to cope the business as per the environment. As the objective of MIS is to equip the managers white timely, complete, regular and reliable information it has to be in formulation of policy, strategy etc.

Figure 2.3
Management Information System for Decision Making



(Murdick, Ross and Claggett;1999)

Interpretation

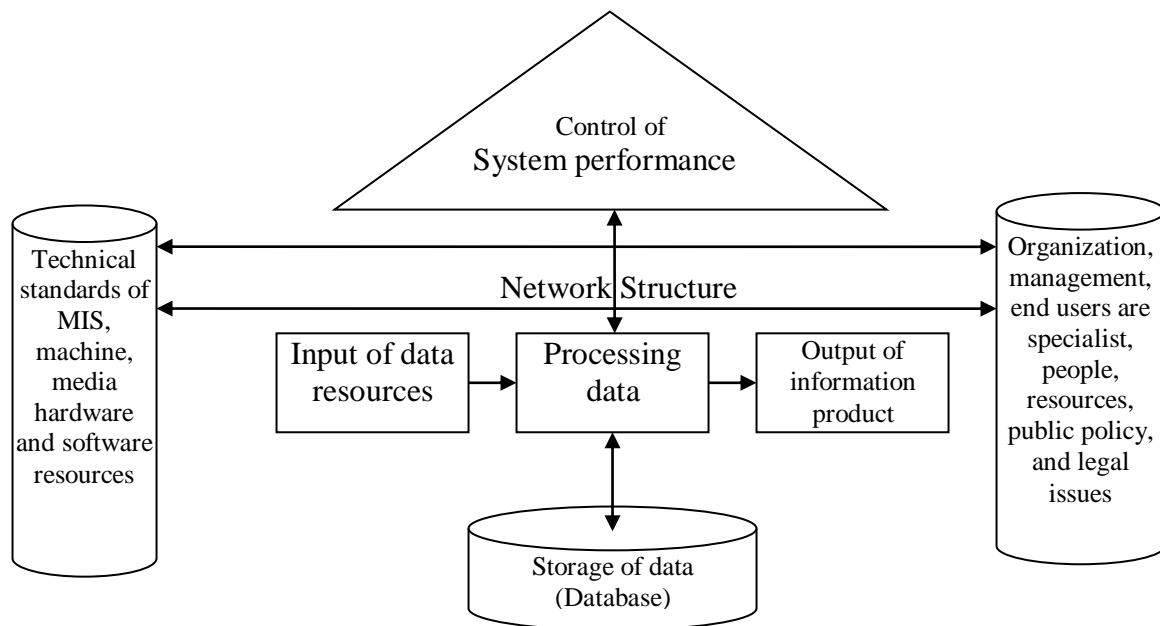
The above figure illustrates an information system model that expresses a fundamental conceptual framework for the major components and activities of information system. It also shows the importance of the MIS in developing strategic plans & decision making.

Architectural framework of Management Information System

The primary function of MIS is to provide accurate, timely and right information to the decision-makers. There are some features for the appropriate MIS. MIS is an organized or planned effort and not the result of some sporadic attempts. The primary function of the MIS is to provide relevant information that assists managers at different levels in organization in decision-making. MIS is form from number of components including hardware, software, manual procedures, models and a database.

Figure 2.4

Architectural Framework of Management Information System



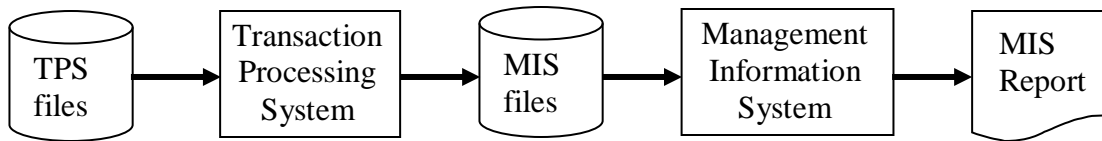
Architectural framework of Management Information System consists of input of data resources, processing data, storage of data and finally the best output of information product MIS presents information in current, usable and easily understandable format. MIS is a system of users and machines. The users are as important to the system as are machines (*Adhikari; 2007*).

Tactical Information System

Management Information Systems are designed for providing information to important personnel in the organization. These systems make use of the already processed

transaction data, which is output from the TPS, and generate information reports after processing data.

Figure 2.5
Tactical Information System



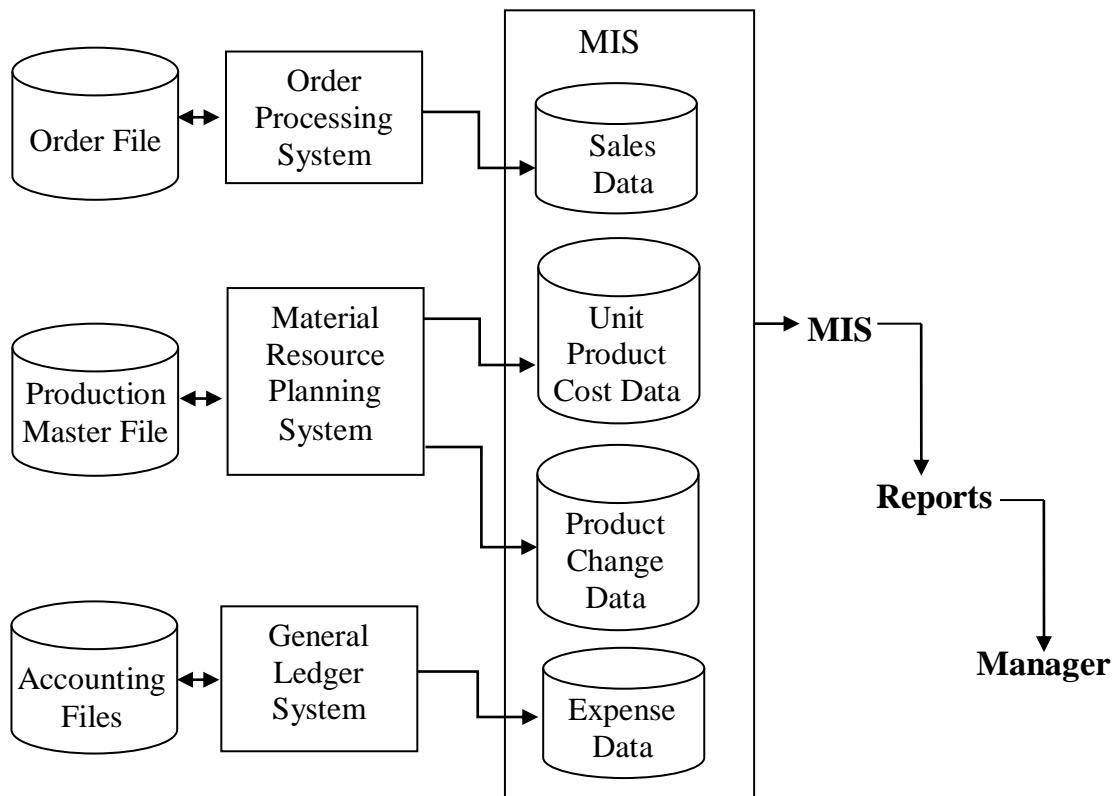
The output of the MIS takes the form of summary reports and exception reports. The summary report accumulates data from several transactions and presents the results in a condensed form (*Adhikari; 2007*).

Transaction Processing System and Management Information System

MIS serve the management level of the organization providing managers with reports or with on - line access to the organization's current performance and historical records. Typically, MIS are oriented almost exclusively to internal, not environmental or external, events. They primarily serve the functions of planning, controlling, and decision making at the management level. Generally, they depend upon underlying transaction processing systems for their data.

Integration of functions and techniques and a conceptual model of the system of organization and management are shown in figure below. A system that integrated the parts resource flows, functions of management, organization theory, and the various techniques. A management information system has been added as a vital additional component. This is the component of the system that provides information for planning, activates plans, and furnishes the essentials feedback information necessary to achieve stability through control (*Murdick, Ross and Claggett; 1984*).

Figure 2.6
Transaction Processing System and MIS



Problem with MIS implementation

Reasons discovered from numerous surveys conducted in developed countries that existing MIS have had relatively little success due to following:

- Lack of management involvement with the design of the MIS;
- Narrow or inappropriate emphasis of the computer system;
- Lack of top management support.
- Poor appreciation by information specialists of management’s true information requirements and of organizational problems.

To be successful, an MIS must be designed and operated with due regard to organizational and behavioral principles as well as technical factors. Management must be informed enough to make an effective contribution to system design, and information specialists (including systems analysts, accountants and operations researchers) must

become more aware of managerial functions and needs so that, jointly, more effective MIS are developed.

Success and Failure of M.I.S

There are some factors, which make MIS a success while there are also some factors, which make it a failure

Factors Contributing to Success of M.I.S

If MIS is to be a success, then it should have all the features listed below:

- An appropriate information processing technology required to meet the data processing and analysis needs of the users of MIS is selected.
- MIS is kept under continuous surveillance, so that its open system is modified according to the changing information needs.
- MIS focuses in results and goals, and highlights the factors and reasons for non achievements.
- MIS is not allowed to end up into an information generating mill avoiding the noise in the information and the communication system.
- MIS recognizes that the different information needs for different objectives must be met with.
- MIS is easy to operate and therefore, the design of MIS has such good features which make up a user friendly design.

Factors Contributing to Failures of M.I.S

Many times, MIS is a failure. The common factors which are responsible for this are as follows:

- Underestimating the complexity in the business systems and not recognizing it in the MIS design leads to problems in the successful implementation.
- Adequate attention is not given to the quality control aspects of the inputs, the process and the outputs leading to insufficient checks and controls in MIS.
- Lack of training and appreciation that the users of the information and the generators of the data are different, and they have to play an important role in the MIS.

- MIS does not meet certain critical and key factors of its users, lack of user friendly system and the dependence on the system personnel.
- A belief that the computerized MIS can solve all the management problems of planning and control of the business.
- Lack of capable manpower and IT experts to handle sophisticated information technology to maintain proper information system within the department.
- Due to mishandling, misunderstanding and gap of information.
- Traditional paper-based information system creates delay in making decision. It should be eliminated through computerized information system.

Hierarchy Level of Management in Nabil Bank

Level of management means the arranged managerial position in an organization as well as it is the system of dividing the authority and responsibility among the various managerial positions. It is concerned with the classification of superior subordinate relationship in an organization. The level of management depends upon the size and nature of the organization. In Nabil Bank limited, the hierarchy of management is divided into four levels.

- i. Top level management
- ii. Middle level management
- iii. Lower level management
- iv. Transaction level management

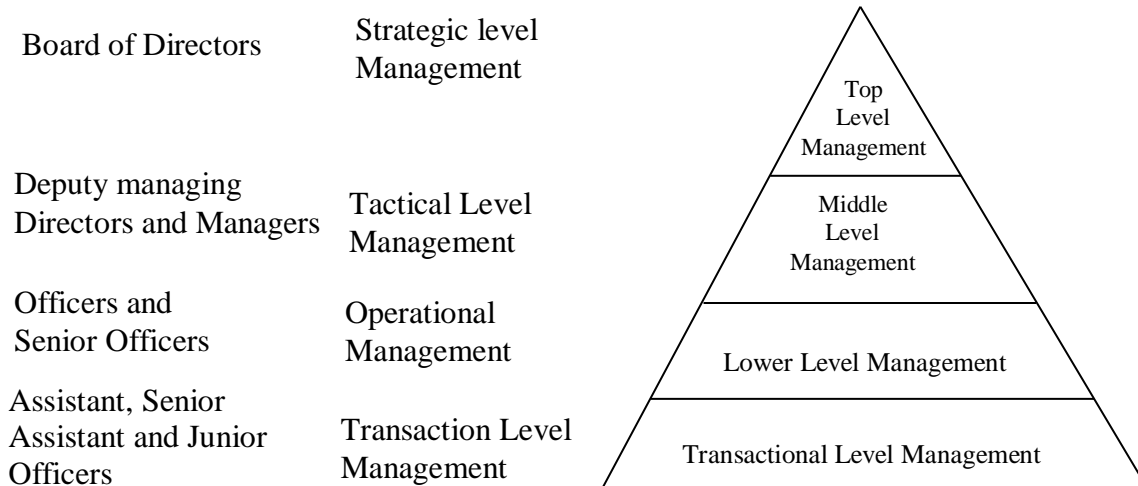
All levels of management are inter-related with each other and are equally important for the smooth operation of management. Even a small mistake of one level can affect the whole management process.

Decision-making is a process of choosing the best alternatives among the available alternatives for the solution of problem raised in the organization. It is a complex task because of the changing and competitive environment, scarce resource & time and due to the organizational goals. It involves the entire process of establishing goals, defining activities, searching for alternatives and developing plans.

The figure given below shows the hierarchy of management of Nabil Bank Limited.

Figure 2.7

Hierarchy of Management in Nabil Bank



All levels of management are inter-related with each other and are equally important for the smooth operation of management. Even a small mistake of one level can affect the whole management process. Decision-making is a process of choosing the best alternatives among the available alternatives for the solution of problem raised in the organization. It is a complex task because of the changing and competitive environment, scarce resource & time and due to the organizational goals. It involves the entire process of establishing goals, defining activities, searching for alternatives and developing plans.

The hierarchy of management is divided into four levels for performing decisions – making functions. They are strategic planning levels, management controls operation controls level and transaction processing levels (*Nabil Bank; Annual Report: 2009*).

i) Strategic Planning (Top) Levels Management

The strategic planning level of management of the Nabil Bank Limited consists of board of directors or the directors. It involves in formulating the plans and policies, setting the objectives of the company and decision making on different issues. The success or the failure of the activities of the company depends on the decision of the strategic planning

level of management. There will be C.O.E., PRESIDENT, VICE –PRESIDENT using different intelligence support system like Decision Support System (D.S.S), Executive Support System (E.S.S), Expert System (E.S), & Artificial Intelligence (A.I).

ii) Management Controls (Middle) Levels Management

The management controls level of management is involves in the implementation of the plans and policies prepared by the top level management. It consists of department heads such as departmental directors. This level of management is responsible for the activities performed by each of their department. There will be Director, Manager using different intelligence support system like Management Information System (M.I.S).

iii) Operation Control (Lower) Level Management

The operation control level of management plays the role of bridge between management control level management and the transaction level of management and performs the controls function. Departmental admin, supervisors etc. performs the operational control level management in Nabil Bank Limited. It control the day-to day operations of the transaction level, keeps the record and provides the relevant date to support the management controls level for decision- making. There will be CO-ORDINATOR, SUPERVISOR, TEAM LEADER using different intelligence support system like Knowledge Works System (K.W.S) & Office Automation System (O.A.S).

iv) Transaction Level Management

The transaction level of management is considered on the day-to-day operations, such as production of goods and providing services to the clients. The maintenance supports to the client by the hardware personals, the records of daily transaction, etc tasks are performed to meet the organizational goals / objective.

There will be Operational sales Representative, Accountant, Clerk, Financial analyst, Teach support representative, Product workers , Retail Association, Administrative Assistant using different intelligence support system like Transaction Process System(T.P.S) To have deep insight of card business of Nabil, firstly types of card their

provisions and steps involved in card management process are discussed. Then trend analysis related to different aspect of Nabil is done (*Nabil Bank; Annual Report: 2009*).

Electronic Card Transaction Process/ E-Card Business Management

Transaction process of card starts when cardholder makes any purchase from merchant. After making purchase, holder gives card to merchant. Merchant enters card number and bill amount in *POS machine* and swipes the card in the machine. Then machine is connected with the online system of the acquirer and balance of card is checked. If sufficient balance is found, transaction is instantly authorized and card limit is reduced correspondingly. But if balance is less than bill amount POS machine will instantly reject the transaction. Then merchant prepares charge slip and holder is asked to sign on it. The slip contains information as card number, cardholder name, expiration date of card and remaining balance.

After giving a copy of the slip to the holder another copy is presented to the acquirer. Acquirer makes payment to the merchant after deducting *discount fee*. Acquirer again claims reimbursement from clearing and settlement department of card association i.e. MasterCard and visa card normally. On the same day card association arranges to debit the account of Issuer by deducting *interchange fee*, which is fixed previously. At the same time it credits the account of acquirer also by deducting interchange fee.

Then issuer books the bill amount as receivable from customer (cardholder). It sends the bill to card holder informing that account of holder will be debited by specified bill amount at fixed date. By that date account of cardholder is debited by the bill amount. After paying the amount to the issuer card limit is automatically reinstated. This is the short briefing of the card transaction process operated by bank with the cardholder.

Here income of acquirer is excess of discount fee over interchange fee. i.e. higher the discount fee high will be the profit margin to the acquirer. Income of issuer is interchange fee minus cost of fund for receivable outstanding period. However other virtual benefit is also attached to issuer. Such as, in order to issue card, holders are

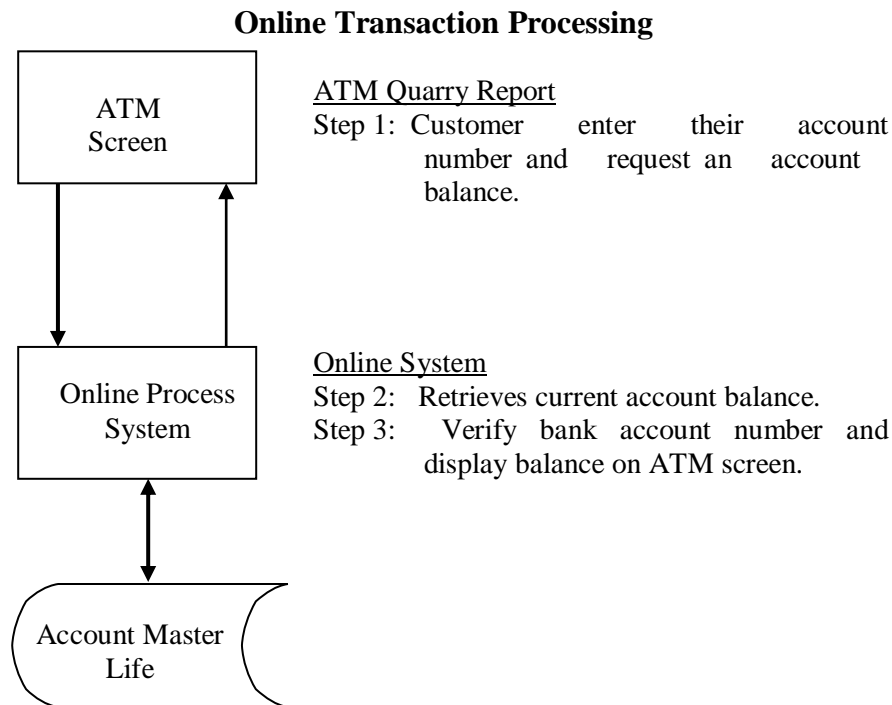
required to open account in bank, which will increase total deposit of bank. Cardholder is also benefited because he can enjoy interest free credit for certain period and it is also more convenient plus safer to make transaction by using card. Although merchant here appears to be loser of transaction, we should not forget that market moves as desired by customer. Since there is lots of advantage of carrying cards, customer loves to carry card. If merchant is not prepared to take the card he loses his customer to his competitor. For example: Let's assume that profit margin of merchant is 20% and discount fee is 3%. If merchant rejects to accept card, then he loses $(20 - 3)$ i.e. 17% in order to save 3%.

Data Processing

Online Transaction Processing

Early computer systems relied mainly on batch processing, but the vast majority of systems today use online processing. An online system handles transactions when and where they occur and provides output directly to users. Because it is interactive, online processing avoids delays and allows a constant dialog between the user and the system.

Figure 2.8



An airline reservations system is a familiar example of online processing. Online processing also can be used with file – oriented systems. Figure above shows what happens when a customer uses an ATM to inquire about an account balance.

Online processing systems have four typical characteristics:

- i) The system processes transactions completely when and where they occur.
- ii) Users interact directly with the information system.
- iii) Users can access data randomly.
- iv) The information system must be available whenever necessary to support business functions.

Batch Processing

In a batch processing system, data is collected and processed in groups, or batches. Although online processing is used for interactive business systems that require immediate data input and output, batch processing can handle other situations more efficiently (*Adhikari; 2007*).

Nabil and ATM Technology

NABIL has very strong and exclusive network branching system within the Kingdom. It is the first bank in Nepal to introduce modern computerized services. It has ABBS (Any Branch Banking System) which facilitates cash and cheque transaction from any of the NABIL Branches within the valley. It has its own accounting software system called “NAB SYSTEM”. It provides telebanking facility to its customer and other branches. It also has an esteemed and extensive correspondent/agency banking relationship with most of the leading banks of the world like Citibank, Amex etc. It also provides International level of services. So, NABIL Bank’s Banking technology is computerized and of quick service.

In keeping with the Bank’s tradition of providing superior services to its customers as well as to increase its shareholder’s return on investment in the long term, NABIL has already commenced the implementation of a world class banking software developed by a renowned software company. With the activation of this system in all the branches by

April 2004, the Bank will be able to further enhance its operating efficiency and offer customer data access and offsite services equal to that offered anywhere (*Nabil Bank Limited; Reports: 2009*).

Introduction of E-Card

Electronic cards have probably gained the most from the Internet revolution, as they account for almost ninety percent of all transactions worldwide today. The big five in credit card industry are VISA International, MasterCard International, American Express, Discover and Diners Club; other check processing companies such as Euro Card, JCB and ATM companies are vying for market penetrations. Because of 'Buy Now Pay Later' concept credit cards are growing popularity in Nepal. No credit checks and no bank account required. .Receive your new Credit card just in few days, and have the freedom to rent cars, reserve hotels, pay your bills, and shop everywhere that is accepted. At the core the concept is simple. Credit card users enjoy a free period of credit before reimbursing the credit card Company. Consumers also have the option of paying only a part of the total amount spend and can carry forward the balance, for which interest is charged. “Credit Card is a small plastic card which is issued instead of money to pay for goods and services from shops, travel companies, reserve hotels, rent cars, petrol stations etc. the cost being charged to one’s account and paid later.”

Meaning and Definition of Different Types of E-Card

In the general term card means payment card, payment card is simple plastic card, which allows holders to make payment simple and convenient for the goods and services purchased at different outlets or active through website. It allows the holders to withdraw money from ATM (automated teller machine) or from the Bank. Now the biggest competitor of card payment business is cash and travelers cheque.

Types of E-Card

a) Credit Card

Credit card is most common type of payment card, which occupies seventy percentage of this line of business. This is a plastic card issued by a bank or financial organization to

enable holders to obtain credit in shops, hotels, etc. It allows holders to purchase or take cash advance in credit basis. Simply speaking it is the concept of "buy now and pay later". The retailer or trader receive daily payment from the credit card company equal to its total sales in a month by the means of that credit card, less a service charge. Customer receives monthly statement from credit card Company, which may be paid within a certain numbers of days, weeks, months or so on, with no interest charge or they may make specified minimum payment and pay interest on the outstanding balance. Credit card is issued by member banks under brand of card associations like AMEX, MasterCard, Visa, JCB, Diners etc.

b) Debit Card

Debit card is also plastic card, which allows direct access to the bank account of cardholder for making purchases or withdraw cash. Although, it looks like credit card its features is completely different. Basic principle of debit card is "use now and pay now". Debit cardholders normally have an account with the bank and the moment he makes any purchase, his account is debited immediately. Debit card can be issued on prepaid basis also by taking the customer deposit in advance without opening bank account. As debit card uses cardholder's own money, they are relatively easier to obtain as comparison to credit card. Most debit card also function as cheque cards and cash card. Member banks and card companies of Visa and MasterCard issues debit card.

c) Cheque Card

This brand of card has been issued by U.K or building society to an approved customer guarantee, any cheque drawn by that customer up to an amount stated on the cheque card. This enables the customer to use cheque for purchase (up to the value of card) from establishment in which they are unknown. Cheque card can be used by a bank customer to draw cash from any branch of that bank.

d) Cash Card

A plastic card-enabling customer of U.K banks and building society to obtain cash from ATM, in conjunction with a PIN *personal* identification number).

e) Charge Card

Charge card seems like a credit card but is not pure credit card. Whatever usage within the preset limit has been made, the cardholder is required to make full payment on the due date.

f) Chip/Smart Card

A chip/smart card is a payment card with a preload value into the card. The card contains embedded electronics chip. Usage is restricted up to the value loaded in the card. The value decreases as cardholder uses the card. Value may or may not be re-loaded as per capability of using bank. These types of cards are known as preloaded card. In this type of card other information like driver license, passport, and medical history of the cardholder can be stored. Recently launched card by Nepal Telecommunication Corporation is an example of such card. These days' convenient credit and debit cards like VISA and MASTER card are also issued in chip/smart card. As a matter of fact visa/master card international encourages members to issue such a chip card/smart card.

g) Gold Card

It is a special credit card that entitled its holder to various benefits (e.g.; an unsecured overdraft, some insurance coverage, a higher limit, and lower limit interest rates) etc, in addition to those offered to the standard cardholders. These types of card are available only to those having higher than average income visa gold is most popular gold card issued by visa international and its members.

h) Multifunctional Card

A plastic card issued by banks or building society to its customer to function as a cheque card, debit card and cash card etc. it operates in conjunction with PIN.

Types of E-Cards Available in Nabil Bank

1. Rupee Charge Cards with Bank's Account

Account holders of NABIL Bank are provided with this facility. A facility whereby one is given an interest free period and which saves from the burdens of paying huge interest.

This is especially beneficial to those who do not wish to carry cash and at the same time, utilize their funds available at the bank without additional service charge or interest.

2. Rupee Credit Cards without Bank's Account

This is best for working class people who need to plan their monthly budgets and at the same time, they are not required to hold bank accounts. This card allows the holder to buy goods and services up to the assigned card limit and pay in easy installments.

3. International Cards Against Travel Quota

NABIL Bank has provided the International cards facility, which is acceptable all over the world. All this is done against the annual travel quota and specific permits given by Nepal Rastra Bank.

Types of E-Card Issued by Nabil

i) Master Card

- a) Master International
- b) Master Local

a) Master International

- It is also known dollar card.
- Card holder's needs to have dollar account.
- Source of income card holder should be in dollar e.g. Travel agencies, Curio Shops, Thanks and art shops, Hotels, Club, Restaurant.
- Opening balance of account should be min 1000\$
- Renewal should be made year to year.

b) Master Local

- It is also known as local card.
- Card can be issued to the people having/not having account.
- In case of account RS account is required.
- Renewal should be made year-to-year.

- It is not ATM compatible.
- In case of account, opening balance of account should be minimum RS.15000 and first deposit of Rs 50000 should be made.

ii) Visa Card

- a) Visa Local
- b) Visa Electron

a) Visa Local

- It is Rupees card and is valid in Nepal and India only.
- Card is issued to both account holder and non -account holder.
- Renewal should be made after two years.
- It is ATM compatible, so pin code is also provided along with card.

b) Visa Electron

- It is debit card.
- Here cardholder's needs to have account.

iii) Travel Quota Card

- It is issued instead of travel cheque. It is also issued as per foreign exchange travel quota rule of NRB assigned during abroad visit.
- To obtain this card, an application form and copy of other normal travel documents (passport and tickets) is needed to submit.
- The limit is fixed as per travel quota or less as wished by cardholder.
- This gives the privilege² and flexibility of using such card by minimizing hassles of foreign exchange conversion and traveler's cheque.

Security Feature of Master and Visa Card

Master Card

- It has sixteen digit serial numbers starting with number 5.
- It has written MC with master hologram.

- Expiry date, Preprinted BIN³ and other identification like signature photograph are also printed in card.

Visa Card

- It has sixteen digit serial numbers starting with number 4.
- It has hologram of flying dove representing visa card.
- Expiry date, Preprinted BIN and other identification like signature photograph are also printed in card.

Eligibility Criteria for Getting e-Card

Person should be at least eighteen years of age, Person should have regular annual income above certain limit, and Person should maintain account with particular card providing bank (especially for debit card). Either Supplementary card can also be issued to spouse, parents and children.

Documents Required Becoming Cardholder

An official or corporate guarantee (depends upon banks own policy), Statement of annual income, in case of NABIL bank minimum level is Rs, 120,000.

1. Citizenship or the passport which is for identification,
2. Debit authority,
3. Financial statement if client is using official account.

Documents Required Being Merchant (for Private Company)

1. Registration certificate of firm,
2. Income tax clearance certificate (PAN1 certificate),
3. Board minute,
4. Memorandum and article of association.

Maestro, Cirrus, Visa Electron, Visa Plus and SCT cards. Nabil also provides service of online payments through its Card Division and selected branches enabling customers to make payments like test registrations, membership fees, purchase of books, journals etc.

Parties Involved in Card Business

Card business is not a one-man business show. There are mainly five parties in Card Business transaction. They are:

a) Issuer

Issuer is a party that issues the card to the ones eligible to acquire the card. Issuer could be a bank, financial institution or any other organization.

b) Cardholder

Cardholder is the owner or member of the card who has authority to use it.

c) Merchant

Merchant is the authority who can accept the cards from the cardholder as a means of payment for the sale of their goods and services.

d) Card Association

The party permits the issuer to issue the card using their brands, sets all the rules and regulations for the use of the cards, plays an active role in clearing and settlement of the transaction.

e) The Acquirer

The acquirer is a party that accepts the transactions made through cards with the merchants and provides cash advance facility to the cardholder. They are also reimbursing agent for the merchant for the Credit Card transaction accepted by them.

f) Settlement Banks

Once the card association makes the net calculations, these net payments are made in respective and nominated account of the acquirer. In case of NABIL bank all the international transaction of VISA and MasterCard payments settlement are done in account of NABIL bank maintained with city bank, New York USA. This account is called Nostrum account for NABIL bank. In case of rupee card all the payments and settlement of VISA are made in NABIL account maintained at bank of America, bank of India

and in case of rupee MasterCard transaction payments and settlement are done in the account maintained at Bank of India. In case of Dinner's Club, all the payment and settlement are concluded at the account maintained at City Bank, Mumbai, India, These Nostrum banks send statements to the NABIL on regular basis and on the basis of account all the reconciliation of pending items are done (*Newspaper; Business Age: 2008*).

Advantages to the Different Parties

1) Advantages to Cardholder

- It minimizes the burden of carrying bulky cash.
- It uplifts the social status of a person.
- It provides interest free credit period for example – If you are holding a Nabil bank Card System and make a transaction on 1 January, then your account is debited on 15 February. Hence, you get a 45 days limit without any interest on it. However, if you fail to repay the fund on right time then interest of 2.25 % outstanding is charged with as additional late payment fee.
- It also provides the facility of withdrawing cash at the cost of a nominal cash advance fee when need arises.

2) Advantages to the Acquirer (i.e. the Bank)

- A bank is authorized to give cash advance on Card Systems. Therefore, it makes a good income from this sub – line business.
- It makes income by the spread of foreign exchange.
- It provides merchant service fee or discount rate to the merchant. When the bank accepts the sales draft from the merchant, it repays the merchant with the amount mention on the draft less a nominal discount.

3) Advantages to the Merchant

- It uplifts or adds glitter to social standing.
- Accepting a Card System is a kind of business promotional activity. For example – there are two travel agencies located close to each other. Among them, one accepts

the card and the other does not, then obviously the agency accepting the card will have good business than one not accepting the card.

4) Advantages to the Issuer (i.e. usually a bank)

- Bank charges a certain joining fee when it issues a card. In case of local card i.e. Rupee card and Dollar card that is valid only in India and Nepal Rs. 1000 as joining fee and Rs. 1000 as annual renewal fee is charged. In case of International, card i.e. valid worldwide US \$ 50 as joining fee and US \$ 50 as annual renewal fee is charged.

Hence, from above analysis it can be seen that higher the issuance base, higher is the chance of making income. In other words acquiring and issuance business are co – related and they move together.

Transaction Procedure Process of E-Card System

Transaction procedure starts with the use of Credit Card by the cardholder and ends after getting the payments by issuing bank from the cardholder.

Following are the transaction procedure process:

- The cardholder purchases goods or services from the merchant.
- The merchant in effects sells the transaction to the acquirer, reimbursed the amount of the sales charge – slips, less, and agreed to discount by the acquirer
- The acquirer then submits the charge-slip to the issuer for payment, through master Card or Visa International and settlement system.
- The issuer bills the cardholder.
- Finally, the cardholder repays the issuer of the goods or services originally purchased from the merchant. The issuer, through the Master Card or Visa International and settlement system would already pay the transaction amount less the interchange fee. Processing time is 3 to 4 days in NABIL Bank.

Risk Associated with E-Card

The main risk associated with operation of e-card is losing and stealing of the e-card. If cardholder fails to inform to the bank in time, the transactions made by the unauthorized third party will be because of the cardholder. Besides this there are many risk associated with the operation of e-Card, which are mentioned below:

1) Lost/Stolen E-Cards

The major and the foremost risk associated with card business is stealing and loosing of e-Card. If the cardholder fails to inform the bank in case he loses the card and if another party misuses the e-card then the cardholder himself is liable for such transaction.

2) Magnetic Stripe Fraud (Skimming)

It is the recent and sophisticated fraud technology, where the information in the magnetic stripe is re-encoded on to counterfeit or altered cards. The card looks genuine when used in magnetic stripe reading terminal.

3) Change of Amount

Sometimes the merchants with fraudulent intention after the actual amount on the sales draft and present them to the acquirer. In such cases, the cardholder denies the charges and presents his copy of the true amount, which makes the merchant at fault and hence, penalized.

4) Signature Forgery

Such type of fraud transaction usually happens in cause of lost or stolen cards where the culprit forges the signature at the back on the signature panel and present to the acquirer. In such situation, cases can be won by cardholder or by the merchants also, depending upon the availability of the supporting from the ends.

5) Expired Card Transaction

If a merchant is making transaction, which is within his floor limit, and does negligence in checking the expiry date on the card, the problem arises. In this case, the acquirer denies processing the transaction and the merchant is at loss.

6) Card Duplication

There are many syndicates around the world engaged in fraud transaction of Card System. They make the exact duplicates of the card, if the bank identification is not used in making the duplicate, it can be caught with the help of sorting machine. However, if the bank identification number is used the cards similar to original cards are circulated in the market.

Disputes Often Raised in Card Business

The main disadvantages of card business is the high level of risk associated with card transaction, hence it results disputes over different grounds in card industry. Some of them are listed below:-

1. Cardholders complaints –goods not delivered, service not rendered, amount altered in account etc.
2. Merchants-cardholders fraud-multiple imprints, transactions on cost/counterfeit card, sold paper etc.
3. Processing errors by acquirer.
4. Violation of rules set by card association.

When cardholder or issuer disputes a transaction and refuses then he charges the transaction back to the acquirer. The acquirer had to return the payment to the issuer. Issuer always initiates the initial or first charge back. It can result from transaction error or complaint from a cardholder. If the dispute is not settled down than it is subjected to the jurisdiction of courts in Kathmandu only.

Following Steps should be taken to Minimize the Risk

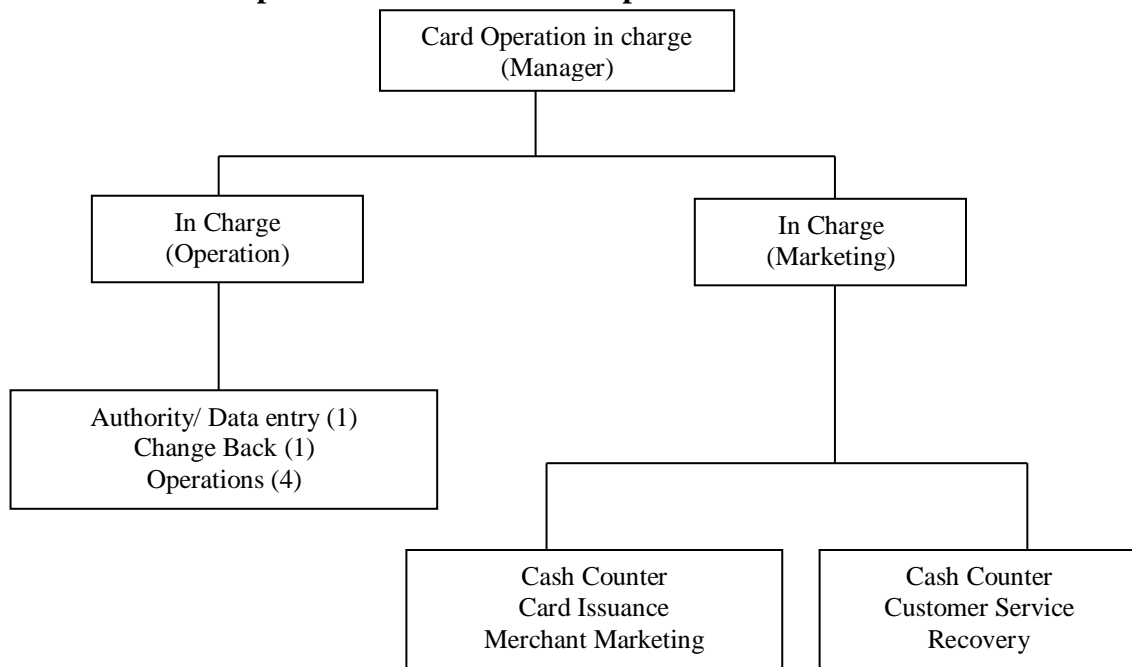
1. Cardholder application must be carefully screened.
2. Proper monitoring of e-card use
3. Educating the cardholders.
4. The bank should keep proper monitoring for sudden high charge transaction.
5. Collection should be done in a Judicious manner.

Manpower Structure of Card Department of Nabil Bank

The bank has expanded its network by opening 9 branches covering wide ranges of business communities and reached out multitudes of socio-economic sectors to trigger the tempo of the economic development of the country. With this the bank has now 28 points of representations in the nation. The bank has purchased anew premise for its Kantipath Branch and is planning to shift to the building in the very near future. The bank has added additional ATMs that total now to 32 in number, the largest location wise network. The bank is committed to expanding its network / increasing its point of representations further in various locations of the nation.

Figure 2.9

Manpower Structure of Card Department of Nabil Bank



Services and Products of Nabil Bank

NABIL provides a full range of commercial banking services through its outlets spread across the nation and reputed correspondent banks across the globe. Moreover, NABIL has a good name in the market for high quality services and products.

Services:

A) Deposits

1. Current deposit:
2. Saving deposit:

- 3. Fixed deposit:
- 4. Call Deposit:
- B) Inward/outward Remittance
- C) Remittance within Nepal
- D) Collections
- E) Guarantees
- F) Safe Deposit Locker
- G) Issuance of Letter of Credit
- H) Issuance of Traveler's Cheques
- I) Purchase of foreign/ local Cheques/ Drafts
- J) Statement of account
- K) Issuance of Credit Card
- l) Telebanking, internet banking service and ATM's

2.2 Review of Articles

History of E-Cards Payment Systems

For the date payment on purchase, Western Union of USA issued a metal plate to prefer customers. It was a way back in 1914. It was only useable to purchase goods and services to side variety, dinners Club introduced the traveling and entertainment card in 1950 with a system of making the payment by club on behalf of the card holder late making reimbursement from these deducting a small "discount" as a commission. In this way, though with other names, the concept of Card System came into existence. But the first real card was introduced in 1951. Flane McNamara, a leading businessman, once found him in embarrassing situation at holiday resort without having money to pay bills. Then he and his friend Blooming Dey started the Card System outfit. Franklin National Bank of Long Island, New York, and USA followed the suit and became the first bank to issue the Card System in 1951. In a very short period of time this business got popularity and in the 60s large number of Bank entered into this field in a huge scale. In 1966, Bank of America expanded its background program by forming the Bank of America Service Corporation, which licensed other bank to issue Bank America to their customers. The same year seventeen master charge made and arrangement for the reciprocal acceptance of their

local Card System at their merchant. Thus, Visa and Master, the leading brand today appeared in the market in 1966. Today there are 18 million of outlets that accept Card System. Today Visa and Master cards are accepted and honored all over the world in more than 170 countries. These two independent card companies not only place banks all over on a competitive ground but also let to latest innovation in the Card System business. Debit card and Smart chip cards are the development of Card System.

Development of E-Card Business in Nepal

E-Card business in Nepal does not boast of a long history. It is very new concept in Nepal. Being a new approach card business has many risks along with its profitability. Many other banks starting this business inferred that this business has bright future and high profitability; otherwise, these institutes would not have carried out the business.

In the context of Nepal, the card business started when the travel agency Alpine Travel Service (ATS) first obtained the license from VISA/ MASTER CARD International in 1985 A.D. as the representative of the Chase Manhattan Bank, Singapore and thereafter, from the Overseas Union Bank, Singapore.

E-Card Systems were introduced in Nepal in 1993. Nabil Bank started with Master card issuance. In the same year, Himalayan Bank issued Himalayan Bank proprietary card, which was closed in 1999 after the introduction of Visa Card System. In 1994, Standard Charter Bank (SCBN) started issuing Visa debit card. Banks have highly promoted the use of these cards and it has gained immense popularity these days.

2.3 Review of Related Research Studies

One important factor underlying systems is that information is a corporate asset and should be recognized as such. In classical economic terms the factors of imports were viewed as land, labor and capital in the modern age, there have become the five M'S: man, money, machine, material and management. To integrate these factors successfully, it is necessary to use information as a sixth factor of imports of petroleum. Although MIS

tried to integrate an organization's resources together in a coherent and effective manner, there were shortcomings.

Decision Making

A definition of decision - making activity is often taken for granted and is associated with making a choice among alternatives. Decision – making is the process by which the decision maker moves from a current position to the position in which she or he wants to be. So Decision – making process can be defined as a series of steps that start with an analysis of the information and ultimately culminate in a resolution a selection from the several available alternatives and verification of this selected alternative and verification of this selected alternative to solve the problem understudy (Er. Shankar Nath Adhikari)

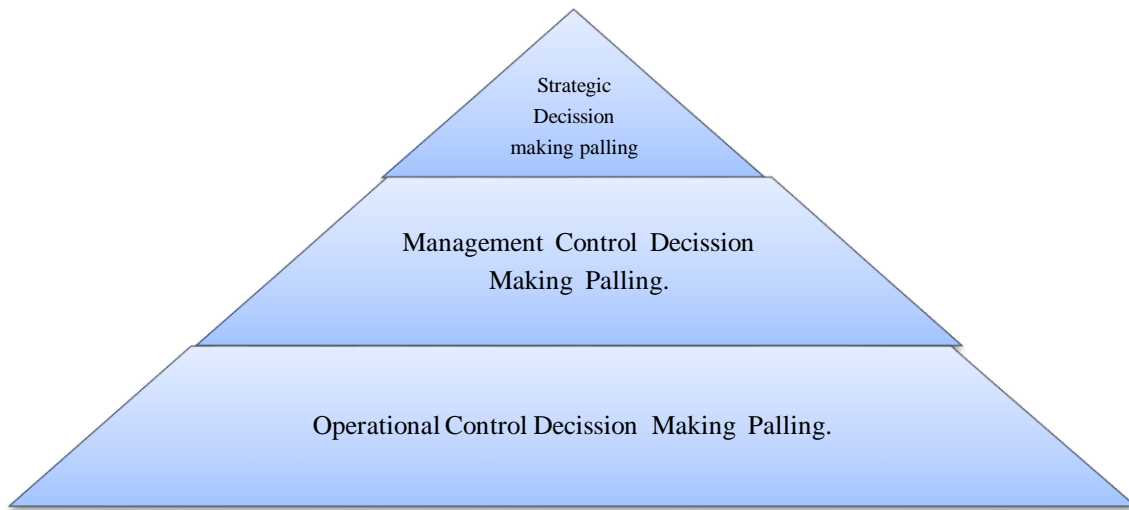
Levels of Decisions

Fundamentally managerial activities and decisions can be segregated in to three categories: those that relate to top. Middle and lower managerial Decision managing at these levels of management has varying degrees in futurity. Strategic palling, Management Palling and Operational Palling. Because the output of and information system is directed toward assisting management in planning and controlling organization activities, it is beneficial to relate the following types of information:

1. Strategic level decision
2. Tactical level decision
3. Operational level decision

To the managerial levels for decision making, generally, Lower management concerned with operational informational for decision making, while tactical information and strategic information are useful to middle and top management, respectively, for making decision. The type of information supplies has to do with the activities with which the information is concerned to internal environment of the organization and the external environment which the organization operates.

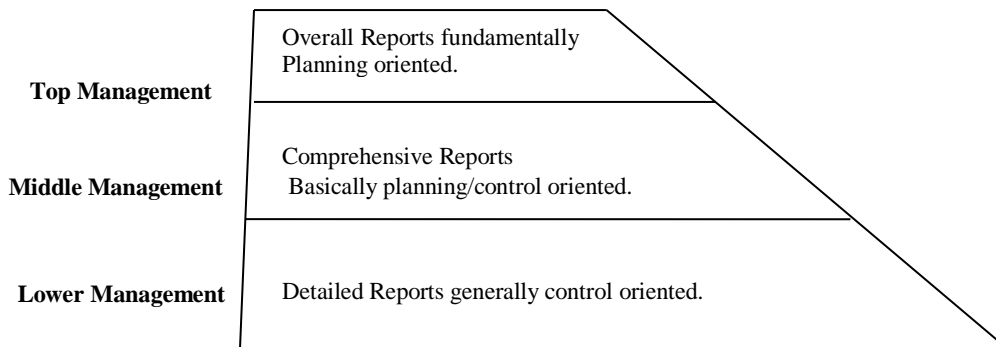
Figure 2.10
Levels of Decisions in Nabil Bank



Information Needed by Management Levels for Planning, Control & Decision Making

It is general fact that internal information should be more and more summarized as the level of management for which it is prepared rises in the hierarchical structure, with top management receiving overall reports operations for future planning.

Figure 2.11
Types of Information Reports Needed by Different Management Levels



On the other hand, lower echelons of management, being control oriented, receive the most detailed reports. Between top and low management is middle management, which is planning oriented. All three levels of informational need are illustrated in Figure above.

2.4 Research Gap

In the above thesis, the overall study is based on MIS of the Nabil Bank Ltd and the detail study is based on the card department of Nabil Bank Ltd where there is no MIS system installed. Information system is based on traditional way so it even lacks proper management and IT experts. Information does not flow systematically due to absence of reliable Network based computerized Information System to coordinate and communicate different divisions and units of the department. So the thesis mainly focus on to improve the process of the electronic payment system and to show the overall status of existing system.

In this thesis, instead of studying on that aspect, the current management information system and card department & administration at various levels of management. To study in this aspect, corporate office placed at Kantipath branch is taken. To get the knowledge of the MIS implemented system and flow of information Nabil Bank Ltd. is studied. The gap of this study is that the data used are only primary data, which is collected from observation, questionnaire, and interview method.

This research is slightly different then other research or research due to which I use here different types of tools like ERD(Entity Relationship Diagram) and DFD(Data Flow Diagram) and model for linear programming which helps to forecast the number of debit card holder and cost-benefit analysis of new purposed system of the bank. And finally M.I.S (Management Information System) for quick decision making process. The conclusion and recommendation made in this study cannot generalize in other banks and from the Review of Literature it has been found that there is no any other Research conducted on the same topic.

CHAPTER - III

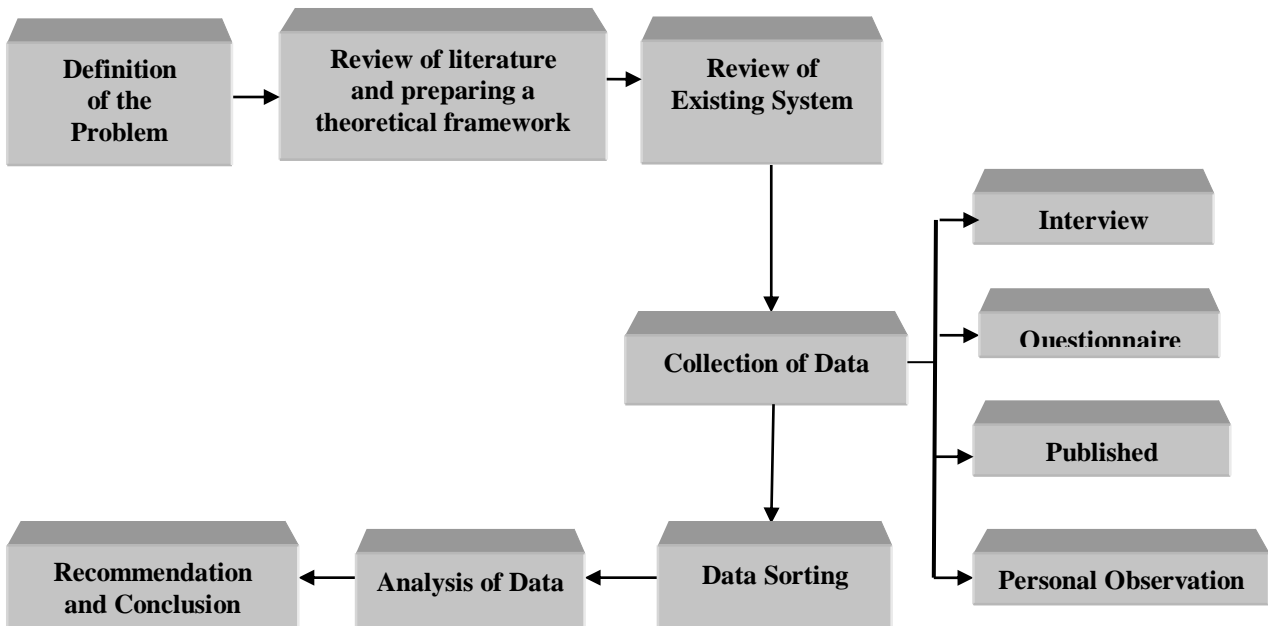
RESEARCH METHODOLOGY

Research methodology is the description of the procedures followed while collecting the necessary data and information needed for the research work. It is a process of systematic and in-depth study of particular subject or topic, backed by the collection, competition, presentation and interpretation of relevant data. For the collection of data different activities were performed; Informal Interview, Observation of the work, study of the related documents and published materials were analyzed. To make the presentation more clear and attractive tabulation and DFD are used.

3.1 Research Design

Figure 3.1

Methodology of the Research Design System



“Research design is a plan, structure and strategy of investigation conceived so as to obtain answer to research question and to control the variance” (Kerlinger; 1999). Thus, research design is an overall plan or frame work for the collection and analysis of data

which provides the frame work for the study, guidelines for the collection and analysis of data. Research design is the process of arriving to the solution of the problem through planned and systematic dealing with the collection, analysis and interpretations of facts and figures. A well-set research design is necessary to fulfill the objectives of any research work.

The analysis of this study is based on certain research design. This study is followed on analytical as well as exploratory research deign. A simple survey is made to collect the opinion of the general public and the concerned personnel regarding the MIS in the Nabil Bank Ltd. Thus, the research design here is exploratory and descriptive in nature. This study examines the system with a view to make suggestions for improving the utilization of MIS. Keeping in view the nature of the study, an exploratory research design is applied because it implies to find out the current role of existing Management Information System in an organization.

3.2 Population and Sample

Out 29 commercial Banks Nabil Bank is one of them "Ka" class Bank. The population sizes of commercial Bank are 29 and Sample size is one. These all Banks are under of Nepal Rasta Bank.

3.3 Sources of Data

Without any data, things will be difficult for study. Therefore, for the statistical investigation, the collection of data is most important. Collection of data means the methods that are to be used for getting the necessary information from the units under investigation. In the course of study, the sources of data collected are mainly of two types. They are as follows:

3.3.1 Primary Data Collection

The data which are originally collected by an investigator or an agent for the first time for the purpose of statistical enquiry are known as primary data. The data is thus original in character. The data which are originally collected by an investigator or an agent for the

first time for the purpose of statistical enquiry are known as primary data. Some of the primary sources of the data for this report are the various questions put forward to the manager of the bank as well as the information provided by the actual credit card holders. Direct interview taken on August 16th 2010 of the Operation Officer of card department Mr. Paras Kunwar of NABIL Bank has been the primary source of data for this report.

Primary Data Collected Methods

- Observations, survey & inquiries
- Questionnaires
- Direct Interview etc.

3.3.2 Secondary Data Collection

The main difference between primary and secondary data is only of degree one. Data which are originally collected but obtained from some published or unpublished sources are secondary data. The main difference between primary and secondary data is only of degree one. Data which are originally collected but obtained from some published or unpublished sources are secondary data. Authorized Web site, Case study Primary Sources: According to Nabil Bank primary data are collected by different related sources like opinion poll, sampling, visiting, accuracy study. Primary Sources: Internal sources Data are found within a Nabil Bank. External sources, Collected from sources outside the Corporation. Data, which are already collected but obtained from some, published or unpublished sources, are known as secondary data. Data, which are primary in the hands of one, becomes secondary in the hands of other. This study is based on the data collected from the annual report of Nabil Bank, balance sheets, different books, thesis and various reports. This type of data is extensively used for the preparation of this report.

Data Collected Methods

- Authorized Web site
- Annual report 2008/2009

3.4 Analytical Tools and Technology

For the preparation of this fieldwork study data are collected from various sources. The data are collected through questionnaire / interview and observation. The achieved data were analyzed, processed and are presented with the help of graphical tool, DFD.

Out of so many tools and technology some appropriated tools and technology I used in this research which I presented below with diagrams and names. Data are collected by using different tools and technique like flow chart, Data flow, Entity relationship etc. For the programme presentation we can use some tools which are mention below.

- A. Algorithm
- B. Pseudo code/ structured English
- C. Flow chart
- D. Data flow diagram (DFD)
- E. Entity Relationship Diagram (ERD)

A. Algorithm

Manually a use tool is algorithm. Step – by – step method of program is called algorithm.

B. Pseudo Code


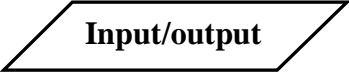





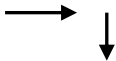

To represent the program by using English with some logical expression like the programs. For an example; If condition, loop streak, etc.

C. Flow Chart

Flowchart depicts the logical flow of the process. It is a pictorial representation of the program or an algorithm. It indicates the various steps involved in designing a system. A flowchart consists of a set of ‘flowchart symbols’ connected by arrows. Each symbol contains information about what must be done at that point & the arrow shows the ‘flow of execution’ of the algorithm i.e. they show the order in which the instructions must be executed. The purpose of using flowcharts is to graphically present the logical flow of data in the system and defining major phases of processing along with the various media to be used. Program are reported in diagrammatically by using standard symbols is called flow chart. Some of the notations/ symbols used for flowchart are following as below:

Table 3.1

Flowcharts Object Symbols and Description

Symbol Used	Description
 Document	Groups of program instruction, which perform a Processing function of the program.
 Input/output	Any function of an input/output device (making information available for processing, recording, Processing information, tape positing, etc.)
 Process	A rectangle can represent a single step or an entire sub Process within a larger process.
 Decision	The decision function used to document points in the program where a branch to alternate paths is possible based upon variable conditions.
 Preparation	An instruction or group of instructions, which changes the program.
 Predefined Process	A group of operations not detailed in the particular set of flowcharts.
 Connector	The beginning, end, or a point of interruption in a Program.
	The direction of processing or data flow of execution
 Summing Junction	Summing Junction

This provides the skeleton of the programmers. The flow chart is planned by the information manager or IT manager or engineer. Flowchart depicts the logical flow of the process. It is a pictorial representation of the program or an algorithm. It indicates the various steps involved in designing a system which the instructions must be executed of data in the system and defining major phases of processing along with the various media to be used.

D. Data Flow Diagram (D.F.D.)

DFD is the diagrammatic representation of the flow of data information through a process system or sub-processes/subsystem. It shows how the data are collected from the different sources and how they go through various processes. During the course of analysis, the researcher had to gather enough information. The researcher used DFD to record to record all the information gathered. Graphical representation of a system's data and how the processes transform the data is known as Data Flow Diagram (or DFD). Unlike, flowcharts, DFDs do not give detailed descriptions of modules but graphically describe a system's data and how the data interact with the system. DFDs are constructed using four major components: external entries, data stores, process and data flows. DFD is a graphical tool used to describe and analyze the movement of data through a system- manual or automated- including the process, stores of data through a system. The DFD shows the inputs and outputs clearly. The DFD has the basic elements namely source, data store and destination. DFD of a system is presented by using context level and system level. The researcher has used Gane/Sarson approach to represent the logical flow of the data.

Diagrams that represent the flow of information from external entity to the system and vice-versa is D.F.D.

Levels of D.F.D:

1. Context level D.F.D:
2. System level D.F.D
 - a. Zero level D.F.D
 - b. One level D.F.D
 - c. Two level D.F.D

1. Context Level DFD

This is one of the most important technique or tools for data collection methods. While preparing this project work or models, I use interviews, questionnaires, and other techniques to gather facts about the system, and they learned how the various people, department, data, and processes fit together to support business operations.

The first step in constructing a set of DFDs is to draw a context diagram. A context diagram is a top-level view of an information system that shows the system's boundaries and scope. To draw a context diagram, I start by placing a single process symbol in the center of the page. The symbol represents the entire information system, and you identify it as process 0. Then I place the internal entities around the perimeter of the page and use data flows to connect the entities to central process. I do not show any data stores in a context diagram because data stores are internal to the system. How do I know what internal entities and data flow to place in the context diagram? I begin by reviewing the system requirements to identify all internal data sources and destinations. During that process, I record the name of the entities, the name and the context of the data flows, and the direction of the data flow.

2. System (Zero, One, Two) Level DFD

Expansion of the single process of the context level into multiple processes is Zero level DFD and expansion of the sub-process into multiple processes from zero level DFD is the One level DFD.


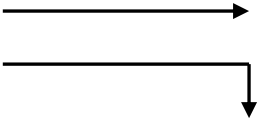
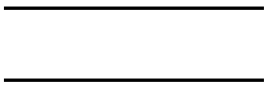
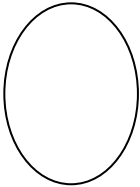
A context diagram provides the most general view of an information system and contains a single process symbol, which is like a black box. To show the detail inside the black box, I create DFD diagram 0. Diagram 0 (the digit 0, and not the letter O) zooms in on a context diagram and shows major processes, data flows, and data stores. Diagram 0 also represents the external entities and data flows that appear in the context diagram.

Process Symbol

A process receives input data and produces output that has a different content, form, or both. For instance, the process for calculating pay uses two inputs (pay rate and hours worked) to produce one output (total pay). Processes can be very simple or quite complex. In a typical company, processes might include calculating sales trends, filing online insurance claims, ordering inventory from a supplier's system, or verifying e-mail addresses for web customers. Processes contain the business logic, also called business rules that transform the data and produce the required results. The process name identifies

a specific function and consists of a verb (and an adjective, if necessary) followed by a singular noun.

Table 3.2
DFD Object Symbols and Description

Objects	Symbol Used	Description
External Entity		It is a person or group, which interacts with the system, something outside the system. It is not a user. e.g., Customer, Supplier, Government Agency, Accounting Department, Human Resources System, etc.
Data Flow		It is the directional movement of data to and from External Entities, the process and Data Stores. In the physical model, when it flows into a data store, it means a write, update, delete etc. Flows out of Data Stores mean read, query, display, select types of transaction.
Data Store		It is a repository of information. In the physical model, this represents a file, table, etc. In the logical model, a data store is an object or entity.
Process (Activity, Function)		Depending on the level of the diagram, it may represent the whole system as in a Context (level 0) diagram or a business area, process (activity), function, etc. in lower levels.

A brief description of the above components is given as hereunder:

i) External Entities

External entities represent the source of data as input to the system. They are also the destination of system data. External entities can be called data stores outside the system. These are represented by squares.

ii) Data Flows

Data flows represent the movement of data from one component to the other. An arrow identifies data flow – data in motion. It is a pipeline through which information flows.

Data flows are generally shown as one-way only. Data Flows between external entities are shown as dotted lines.

iii) Data Stores

Data stores represent stores of data within the system. Examples: computer files or databases. An open-ended box represents a data/store – data at rest or a temporary repository of data.

iv) Process

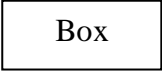

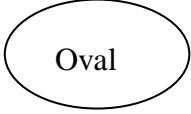
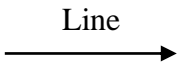
Process represents activities in which data is manipulated by being stored or retrieved or transferred in some way. In other words we can say that process transforms the input data into output data. A rounded rectangle stands for a process that converts data into information.

E. Entity Relationship Diagram (ERD)

An ERD is a data modeling technique that creates a graphical representation of the entities, and the relationships between entities, within an information system. There are 3 main components of an ERD:

- a) The entity – a person, object, place or event for which data is collected. Entity is represented by a rectangle and labeled with a singular noun. For a business information system entity could be customer, customer's address etc.
- b) The relationship is the interaction between the entities. It is represented by a diamond shape, or more, simply, by the line connecting the entities. Verbs are used to label the relationships.
- c) The cardinality defines the relationship between the entities in terms of members. The three main cardinal relationships are: one to one expressed as 1:1; one – to – many expressed as 1: M and many – to – many, expressed as M:M.

Table 3.3
Symbols of ERD

S.N	Symbols	Comments
1.		It is used for entity representation. It contains objects used in relational database.
2.		Diamond represents relationship .
3.		The oval or ellipse is used to represent attributes of entities.
4.		It is used to link attributes to entity sets and entity set to relationship.

3.4.1 Tables, Figures and Chart

Table, graphs and charts are convenient ways to clearly show the data. Some tables and figures are so important for the correct evaluation of the business or the position about the corporation if they are correct. Some important tables and figures are presented here. Which are so important for the decision making or this research.

Decision Tables

A decision table shows a logical structure, with all possible combinations of conditions and resulting actions. Analysts often use decision tables, in addition to structured English, to describe a logical process and ensure that they have not overlooked any logical possibility.

Table 3.4
Decision Table

Subject Title	1	2	3	4
Subject 1	Y	Y	N	N
Subject 2	Y	N	Y	N

On this way decision table is created by computerized system.

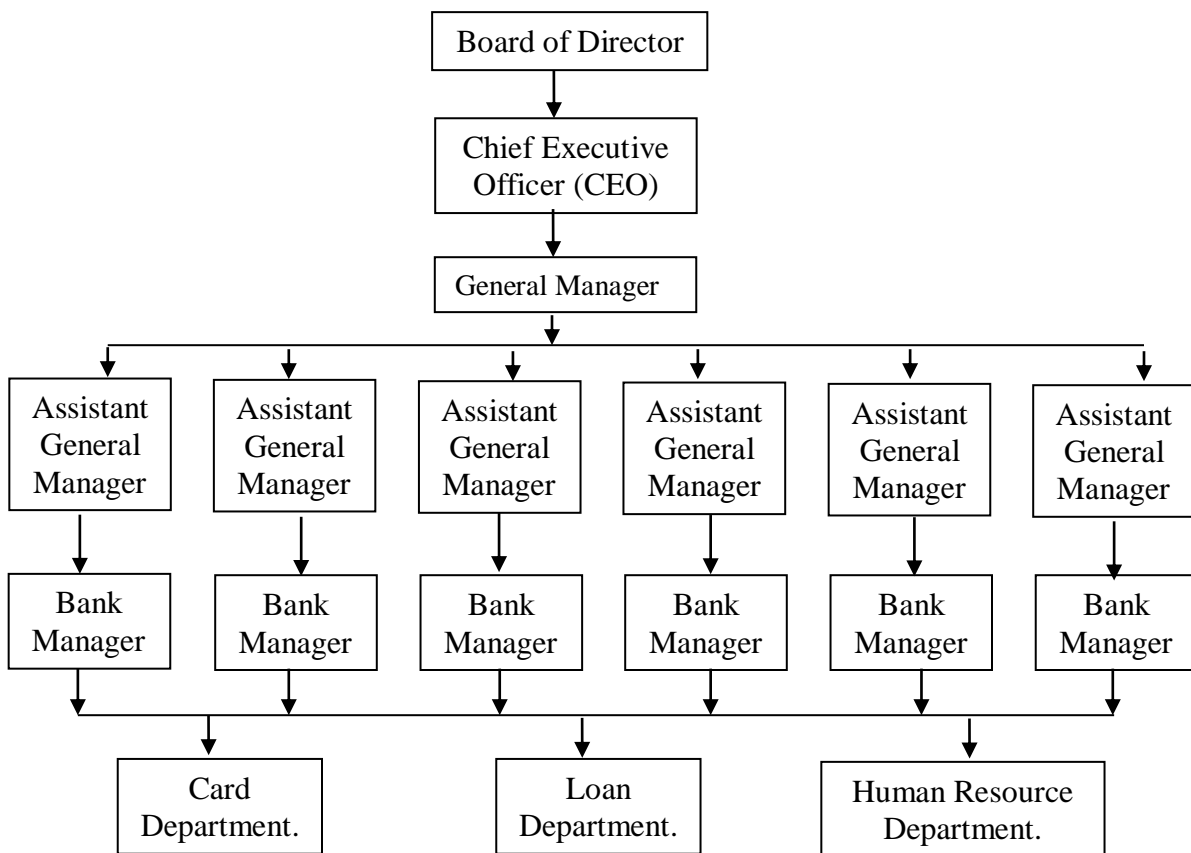
CHAPTER - IV
SYSTEM ANALYSIS, DESIGN AND
DATA PRESENTATION

4.1 Organization Structure

Every organization is run under one kind of system. System is managed by the organization itself. System is one kind of Mechanism which bound the organization. Under this one important system is Organization chart. Which classified the chart of work and also known as work Division, which is also known as Organization Chart.

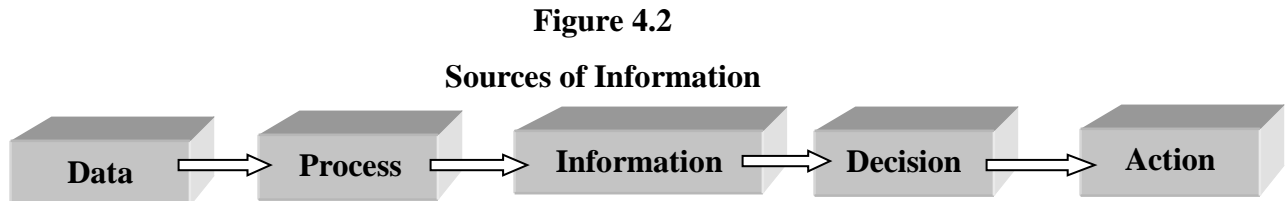
Nabil Bank is also service oriented business. It is also under a Organization Chart which is Prepared below.

Figure 4.1
Organization Chart of Nabil Bank Limited



4.2 Sources of Information

Information can be defined as the data, which can be organized and presented so that the decision maker may take the necessary action. In other word, information is the result of processing data. The conversion process of data into decision is shown in the figure below:



From the above figure, it is clear that information consists of data that has been retrieved, processed or otherwise used, for informative purposes. Information contains an element of surprise, reduces uncertainty and triggers off action.

The main sources of information are primary information and secondary information. Which is listed in below:

- A. Primary information
- B. Secondary information

A. Primary Information

Such information which I collected from different sources without direct visiting is primary information.

Presentation and Analysis of Primary Data

The primary data were collected by distributing the questionnaire to the users of officers' level who in the normal operations of the business makes the decisions. The primary data facilitates us too know the different view and hypothesis of the users of the information required in the organization. Analysis of Primary data deals with the qualitative aspects of information and MIS. The analysis is based on the opinion of the respondents.

The response from the responded in the query is mentioned and analyzed her point wise as per the questionnaire distributed.

- Do you think M.I.S information is vital in operation of the business?

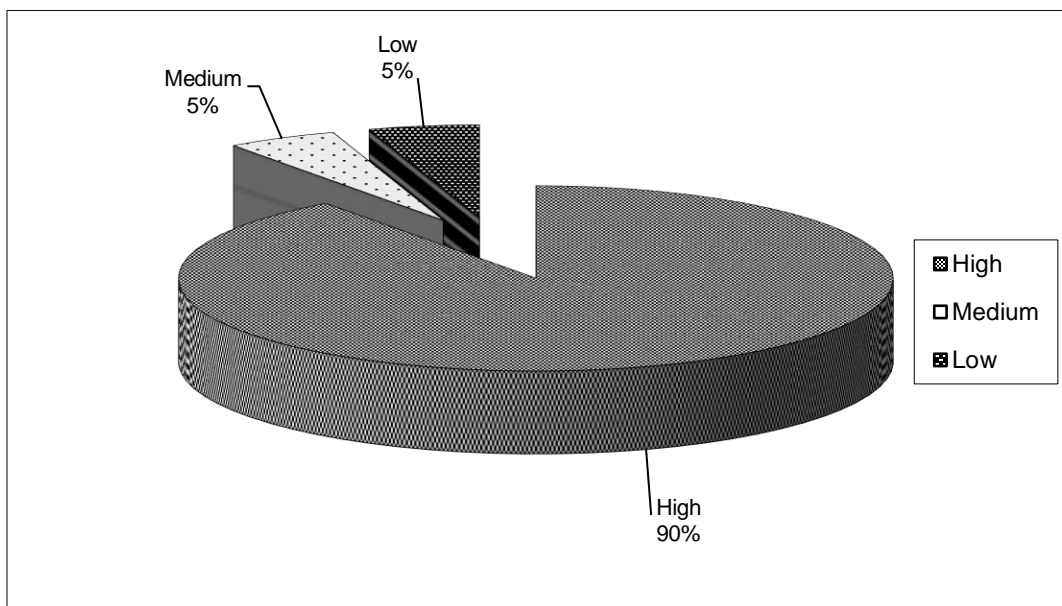
Table 4.1

Importance of M.I.S Information in Operation of the Business

Particulars	Response	Percentage (%)
High	18	90%
Medium	1	5%
Low	1	5%

Figure 4.3

Pie chart of Importance of M.I.S Information in Operation



Interpretation:

It means that almost (90%) the bank's staffs are aware about the usage & importance of M.I.S information and consider this as a vital element for decision making or in normal operation of the business organization.

- **How do you collect the Data Information?**

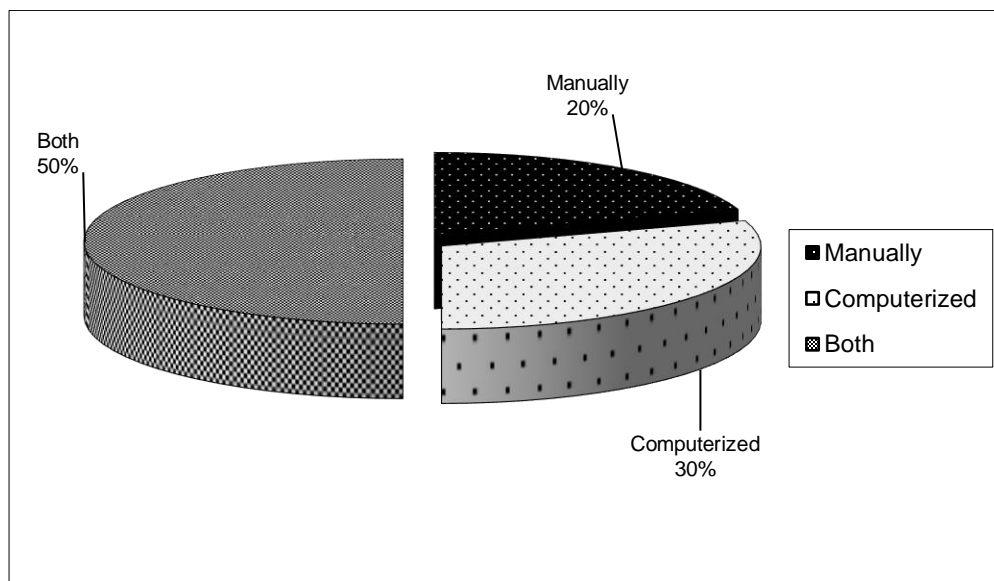
Table 4.2

Collection of Data information

Particulars	Response	Percentage (%)
Manually	6	20%
Computerized	9	30%
Both	15	50%

Figure 4.4

Pie chart of Collection of Data information



Interpretation

The above figures reflect that most of the bank's staff (50%) collect the data information both (manually and computerized) where as only 20% bank's staff collects it manually and 30% only from computer.

- **Do you have knowledge of Online E-Banking Services?**

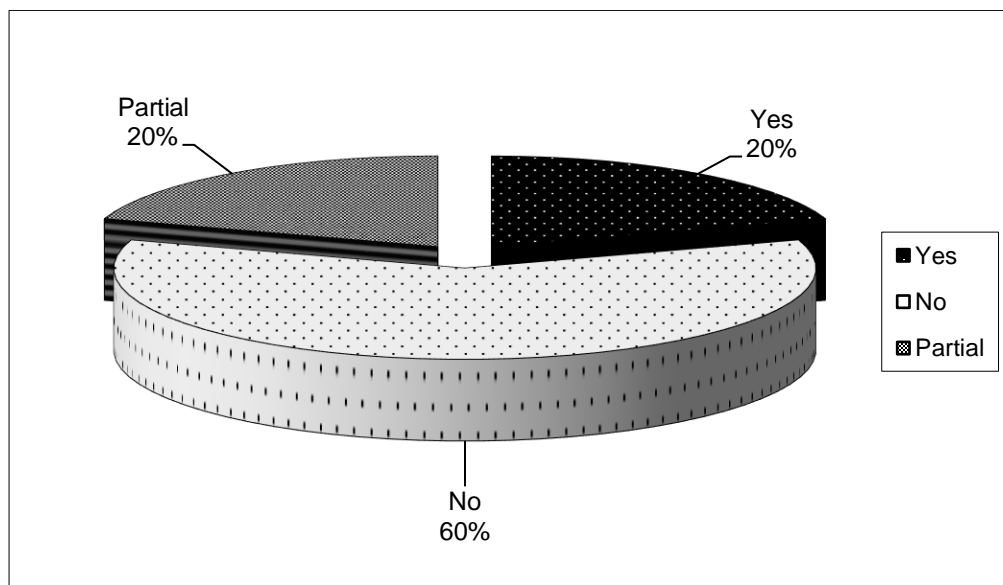
Table 4.3

Having knowledge of Online E-Banking Services

Particulars	Response	Percentage (%)
Yes	4	20%
No	12	60%
Partial	4	20%

Figure 4.5

Pie chart of having knowledge of Online E-Banking Services



Interpretation

The above figures reflect that most of the customer (60%) does not have good knowledge of Online e-banking services and where as only 20 % customer have knowledge of Online e-banking services and remaining 20% customer have partial knowledge only.

- Do you get required data information through Network (LAN & WAN) for MIS Purpose?

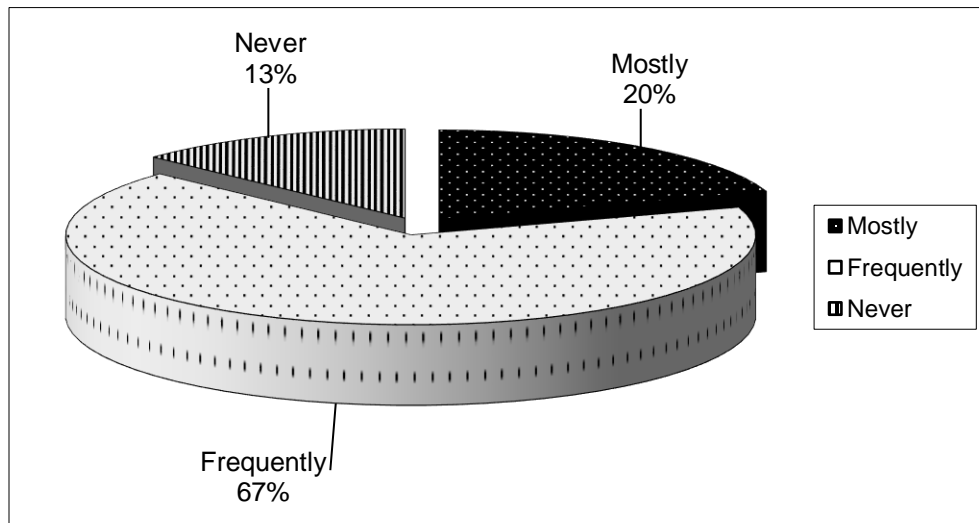
Table 4.4

Access of data information through Network for MIS purpose

Particulars	Response	Percentage (%)
Mostly	6	20%
Frequently	20	67%
Never	4	13%

Figure 4.6

Pie chart of Access of data information through Network for MIS



Interpretation

As per above figure and chart, most of the bank’s staff (20%) access the data information through network for day to day operation for MIS purpose whereas 67% of bank’s staff use network frequently and 13 % bank’s staff never accesses through it.

- **Do you need separate MIS Department for Decision Making?**

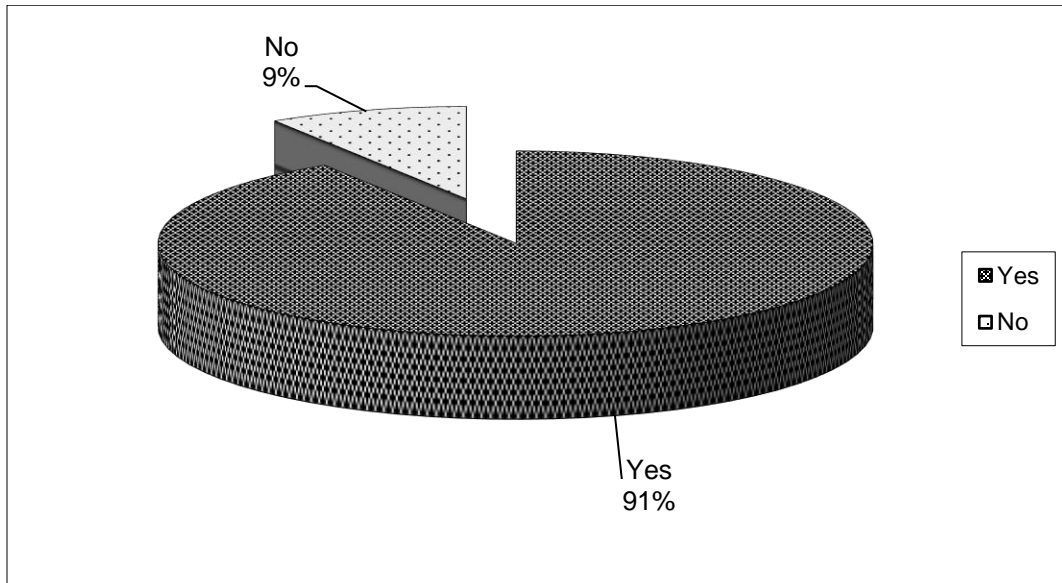
Table 4.5

Need of separate MIS Department for Decision Making

Particulars	Response	Percentage (%)
Yes	50	91%
No	5	9%

Figure 4.7

Pie chart of Need of separate MIS Department for Decision Making



Interpretation

From the above figures and chart it is noted that most of the bank's staff (91%) are in the view that separate MIS department is essential for quick decision making where as 9% of them ignored about the need of separate MIS department for Decision Making.

- Do you satisfied with Existing Electronic Payment System?

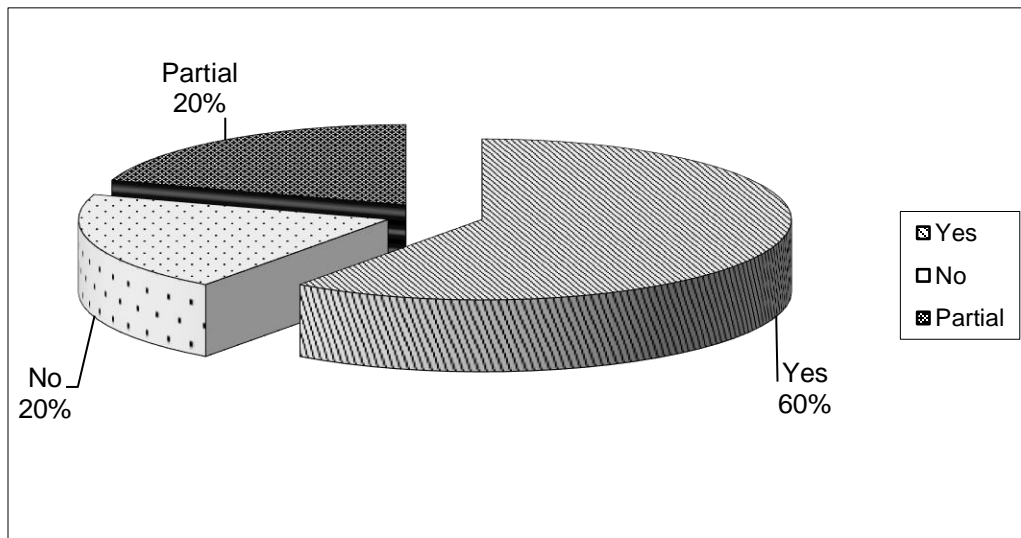
Table 4.6

Satisfaction with Existing Electronic Payment System

Particulars	Response	Percentage (%)
Yes	15	60%
No	5	20%
Partial	5	20%

Figure 4.8

Pie chart of Satisfaction with Existing Electronic Payment System



Interpretation

As per above chart and figure, 60% of the customers are satisfied with the existing electronic payment system whereas 20% of the customers are not satisfied with the existing electronic payment system and 20% customers are partially satisfied with existing electronic payment system.

- **Do you need to Upgrade Existing Electronic Payment System?**

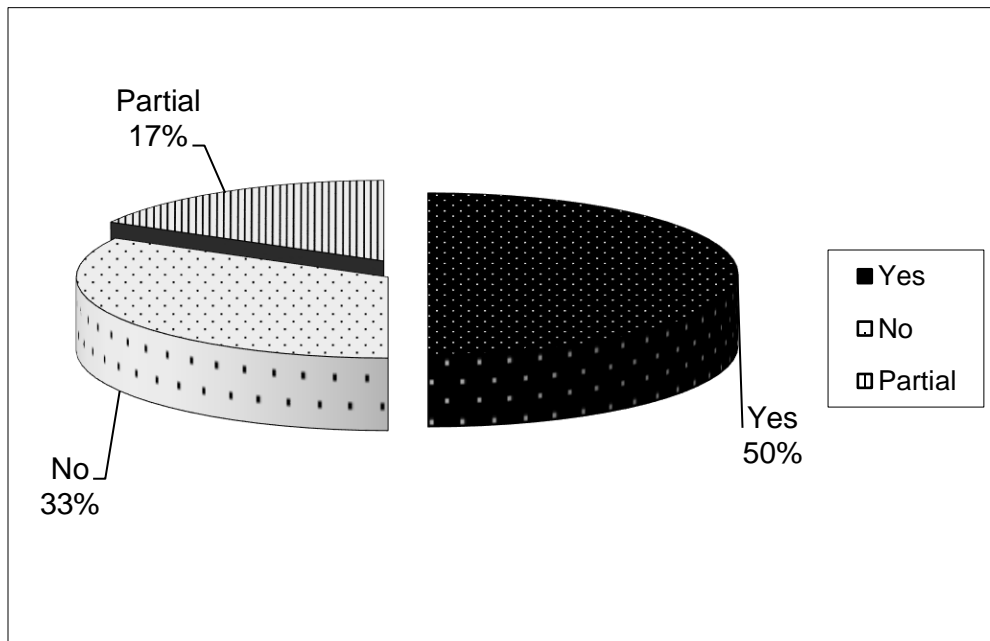
Table 4.7

Upgrade Existing Electronic Payment System

Particulars	Response	Percentage (%)
Yes	9	50%
No	6	33%
Partial	3	17%

Figure 4.9

Pie chart of Upgrade Existing Electronic Payment System



Interpretation

As per above chart and figure ,50% of the customers need to upgrade the existing electronic payment system whereas 33% of the customers does not need to upgrade the existing system and 17% customers need to upgrade existing electronic payment system partially.

B. Secondary Information

Those information which are collected through directly visited to the related office is secondary information. No of cards issued through direct Enquire.

Table 4.8

No of Cards Issued Through Direct Enquire

Year	Number of Cards Issued By various Banks
(2006)	12300
(2007)	13900 (Approximately 14000)
(2008)	15000

Debit cards were introduced in 2003/2004. There were altogether **13080** debit cards issued in the market. During 2005, the growth in debit cards went up to **23206**. There was a growth of 77% in 6 months. (Source: Direct interview). About 4000 location in Nepal accepts the cards during transaction.

4.3 DFD of Existing System

During the systems analysis phase, we learn how to create a visual model of the information system using a set of data flow diagrams.

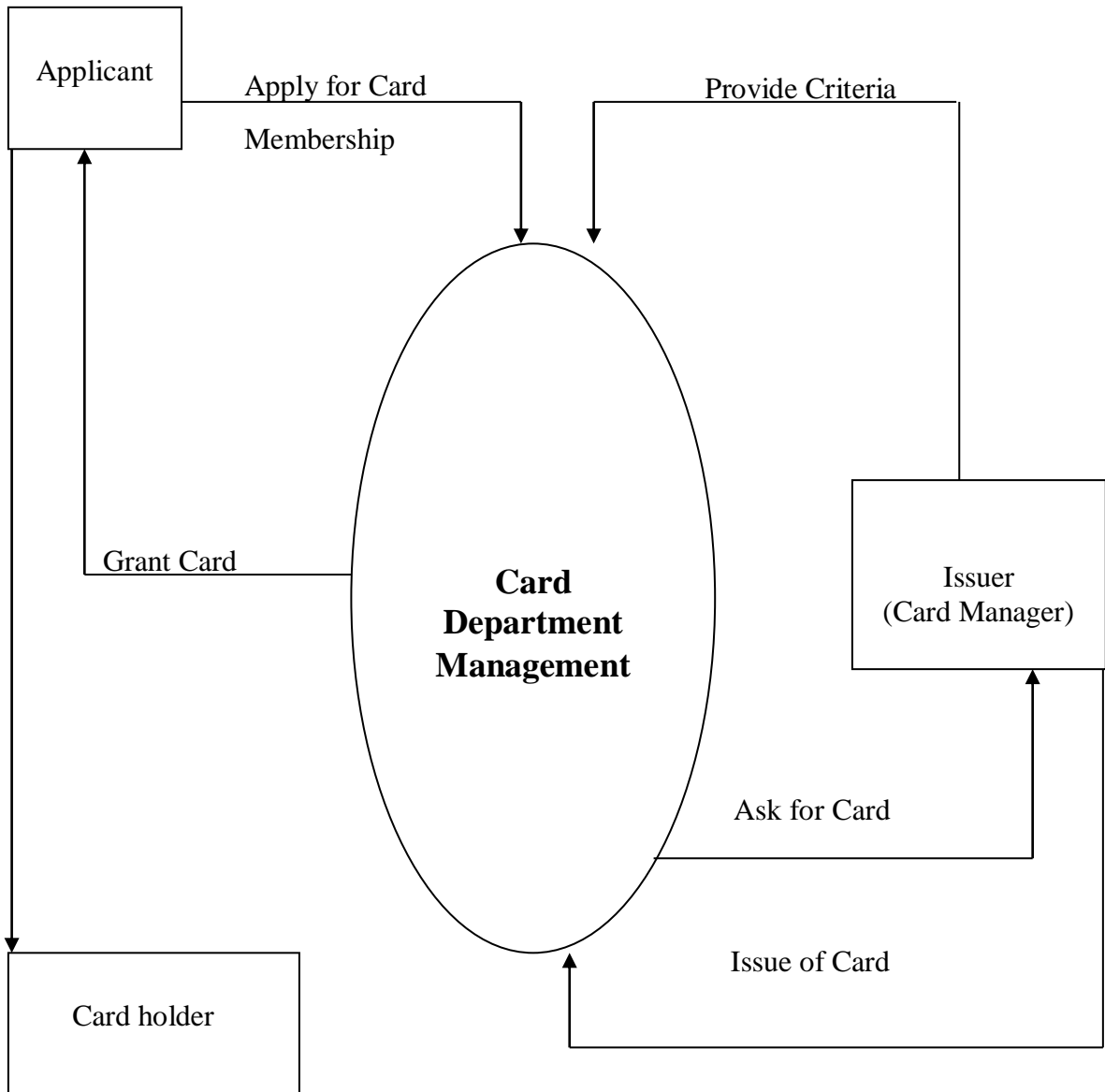
A data flow diagram (DFD) shows how data moves through an information system but does not show program logic or processing steps. DFDs represent a logical model that shows what the system does, not how it does it. That distinction is important because focusing on implementation issues at this point would restrict your search for the most effective system design.

The main process of existing Data Flow Diagram is Card Department Management. Here are mainly Three Entity they are Applicant, Card issuer and Card holder. There is relation between Process and entity. This Existing DFD cannot follow the process of depositing money. This system is totally new for Nepal.

4.3.1 Context Level DFD

The first step in constructing a set of DFDs is to draw a context diagram. A context diagram is a top - level view of an information system that shows the system's boundaries and scope.

Figure 4.10
Context Level DFD of Electronic Payment System



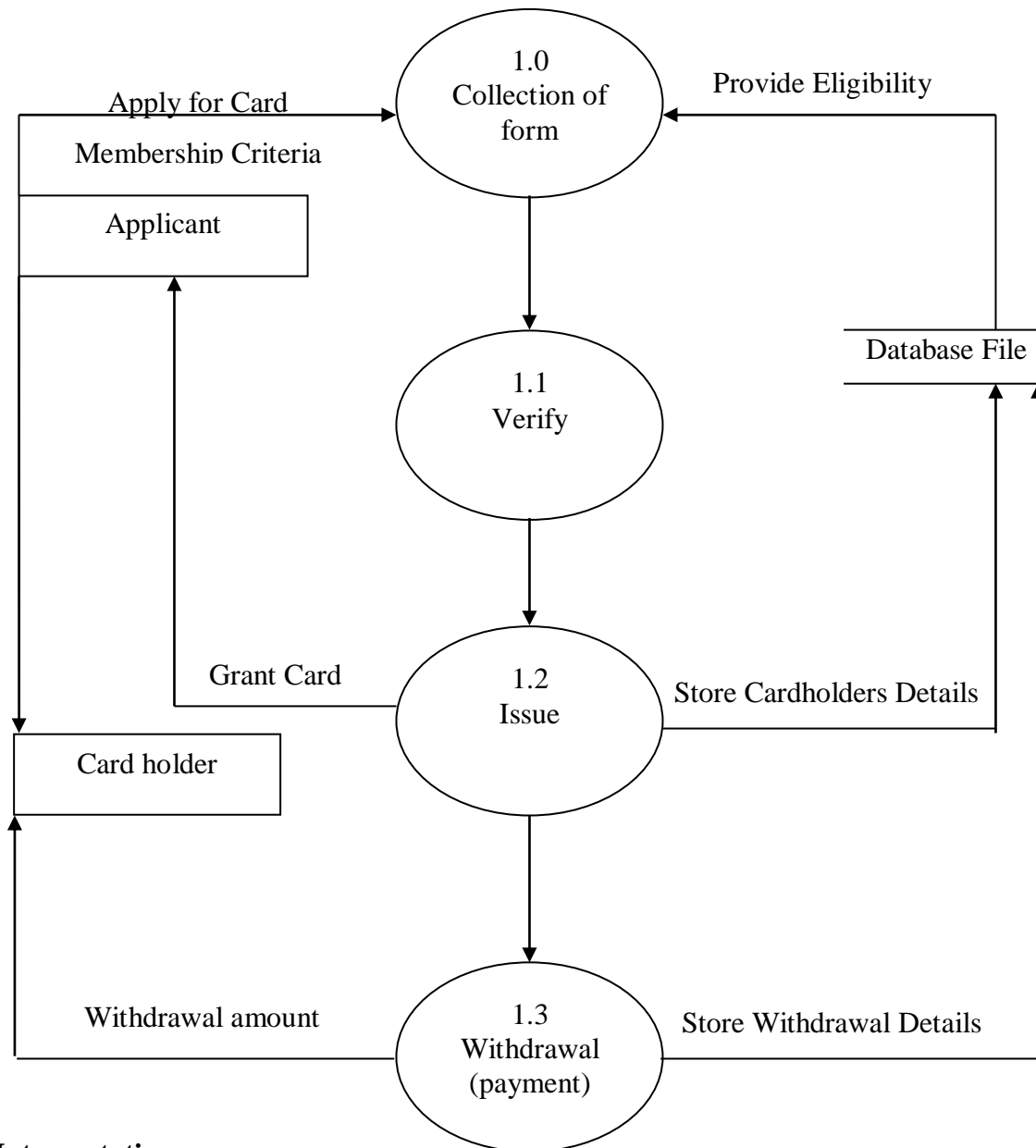
Interpretation

The main process of existing Data Flow Diagram is Card Department Management. Here are mainly Three Entity they are Applicant, Card issuer and Card holder. There is relation between Process and entity.

4.3.2 System Level DFD

System level DFD show the more details data flow, than the context level DFD, it also represents the external entities and data flow that appear in the context diagram.

Figure 4.11
System Level DFD



Interpretation

A DFD Diagram show details data flow diagram of card department starting from collection of forms, its verification, its issue of e-card, and withdraw of amount.

For the application of the card membership, first of all applicants should fill a form and submitted to the related department. The database management provides eligibility for this and applicant is granted for the card. Second process for the card granted is after verifying the card. It should be issued by the bank and at last applicant can use of this card according to his bank balance he or she can withdraw money.

4.4 Analysis of Existing Technology

Technological innovation can take several forms. However Nabil Bank is using different technologies which help to gets the advantages in a particular way.

Supplier – Technology

This technology gives knowledge on how these new technologies might transform business processes in their part of the value chain. This remains the current challenge for organizations in many different sectors in exploiting computer hardware and software developments. Supply is focused on ATM box.

Scale – Technology

Advantages are gained from economies of scale and learning results from that scale. The ATM produce ATM boxes and user sells the service. So, the sells technology is advanced technology.

Information – Technology

Such as in financial services – where the exploitation of IT (Information Technology) is the central strategic issue.

Science – Based Technology

It is still important in many sectors such as pharmaceuticals, electronics, materials and engineering. The strategic challenges are to monitor academic research, develop imports and acquire the resources to achieve commercial – scale production (Deposited ATM Box).

Service – Technology

This type of technology is rigid in nature providing standardized service to customer. The main focus of this technology is development and scheduling of human resources for providing service to customer.

Computer technology is most important technology which is used in this bank.

- Personal computers
- Software
- Communication networks greatly effective for the corporation.

Nabil Bank paying 4, 50,000 for the price determination software technology to the platform on net software.

4.5 Limitation of Existing System

Some limitations are mentioned as point based below:

- Existing technology is not secured as it has chance of money lost.
- Inter-banking ATM charge is high.
- Existing technology is long time process.
- The cost incurred in existing technology is high.
- Existing technology is not so convenient to the depositor.

4.6 Concept of New System or Modify the System

In this new system clients can deposit their money from anywhere. The ATM box provides slip for deposit amount in figure. In this new system there is no additional external entity. There is no queue system. This system protects the time factor and provides the board facilities of wide technology.

4.7 Comparison between New and Existing System

There is huge comparison between new system and Existing system. Existing system can only be possible for withdraw money but the new system can receive money also. It is quite good for daily saving but may be a problem for huge deposit. The existing system is

traditional system but the new system is worldwide system in development countries using this system.

Table 4.9
Comparison between New and Existing System

Existing System	New System
1. The main problem of existing system is that it cannot accept deposited money.	1. The modified system can accept the deposited money from same ATM.
2. Only data in report of balance and withdrawn amount.	2. Accuracy of data in report of balance; deposit and withdrawn amount.
3. The existing system process is too long which takes a lot of time who wants to deposit money.	3. The modified system process will become easy and take a small time to deposit money on same ATM box.
4. The existing system looks costly and has minimal Effectiveness and efficiency.	4. The New system is economical and effective efficiency in work will increase significantly.
5. The existing system has two different places one for deposit and other for withdraw.	5. The modified systems have one common place for both deposits as well as withdraw.
6. The existing system is just benefit to the bank only.	6. The implementation of New System will benefit to both customers & to the bank.

4.8 Application Modeling for Forecasting of Debit Card users in 2014 AD

To estimate the value of economic variable trend line can be use in terms of mathematics form i.e.,

where,

Y = unknown economic variable

a & b = constant

b = trend line

a = intercept of y

x = Known time variable.

We can use least square method in equation

$$\Sigma y = na + b\Sigma x \dots\dots\dots(i)$$

$$\Sigma xy = a\Sigma x + b\Sigma x^2 \dots\dots\dots(ii)$$

As $\Sigma x = 0$,

$$a = \frac{\Sigma y}{n}$$

$$b = \frac{\Sigma xy}{\Sigma x^2}$$

On this way we can determine the value of a and b and substitute the value of a and b in to the $y = a + bx$ equation and we can forecast the value of required time period.

I represent here a mathematical model related to this trend line projection or time line, which is belongs to the forecasting model of cards user in 2014 A.D, have to manage the large no. of ATM boxes for the cards holders.

Table 4.10
Forecasting model of Debit Cards user in 2014 AD
Nabil Bank

Users of debit cards (Nabil Bank)

Years X	Debit cards users(Y)	X = X – 2007	X²	xy	y_c
2005	11,339	-2	4	-22678	1000
2006	18,246	-1	1	-18,246	20895
2007	28,512	0	0	0	40790
2008	51,835	1	1	51,835	60685
2009	94,019	2	4	188,038	80580
Total	ΣY=203,951	Σx=0	Σx² = 10	Σxy = 198949	

Let the trend time be

$$Y = a + bx \dots\dots\dots(i)$$

As $\Sigma x = 0$.

$$a = \frac{\Sigma y}{n} = \frac{203,951}{5} = 40,790.2 , \text{ approximately } a = 40,790$$

$$b = \frac{\Sigma xy}{\Sigma x^2} = \frac{198,949}{10} = 19,894.9, \text{ approximately } b = 19,895$$

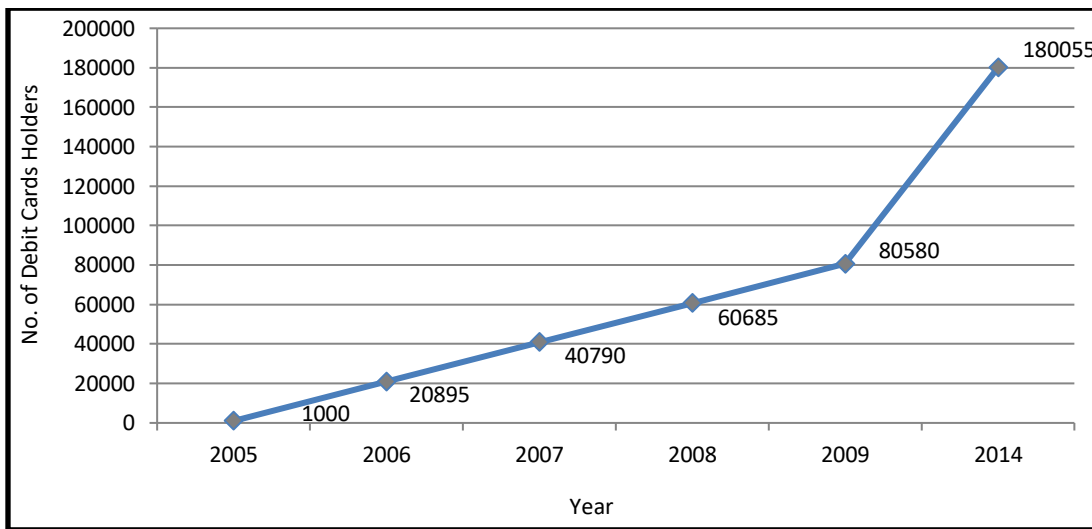
From the trend line $Y = a + bx$

$$\begin{aligned} Y &= 40,790 + 19895(-2) = 1,000 \\ &= 40,790 + 19895(-1) = 20,895 \\ &= 40,790 + 19895(0) = 40,790 \\ &= 40,790 + 19895(1) = 60,685 \\ &= 40,790 + 19895(2) = 80,580 \\ &= 40,790 + 19895(7) = 180,055 \end{aligned}$$

Now for the 2014 A.D, Total No. of cards users are $= 40,790 + 19895(7) = 1,80,055$.

Figure 4.12

Trend Line Projection of Debit Card Holder in 2014 AD



Interpretation

The line graph forecast the debit cards user in 2014 A.D. will be total **1, 80,055** visa cards holders use cards for withdraw money through ATM box. The trend line Projection clearly showing the no. of cards users in 2014. This is one important model for forecasting the debit card user of Nabil Bank Ltd. in 2014AD.

The given model for forecasting the debit card user in 2014AD of Nabil Bank Ltd. which is prepared on Excel sheet is shown below:

The screenshot shows an Excel spreadsheet with the following data:

years	Cards users	x=Mid year(2007)	Square of x	xy	Yc
5	imports data	A5-midyear	C5*C5	C5*B5	B10/A10+E10/D10(A5)
6		A6-midyear	C6*C6	C6*B6	B10/A10+E10/D10(A6)
7		A7-midyear	C7*C7	C7*B7	B10/A10+E10/D10(A7)
8		A8-midyear	C8*C8	C8*B8	B10/A10+E10/D10(A8)
9		A9-midyear	C9*C9	C9*B9	B10/A10+E10/D10(A9)
10	no. years	Sum of B5 to B9	Sum of C5 to C9	Sum of D5 to D9	Sum of E5 to E9

The Excel interface shows the 'Page Layout' tab selected, with various options like Margins, Orientation, Size, Print Area, Breaks, Background, Print Titles, Width, Height, Scale, Gridlines, Headings, Bring to Front, Send to Back, Selection Pane, Align, Group, Rotate, and Arrange. The status bar at the bottom shows 'Ready', '100%', and the time '8:49 AM'.

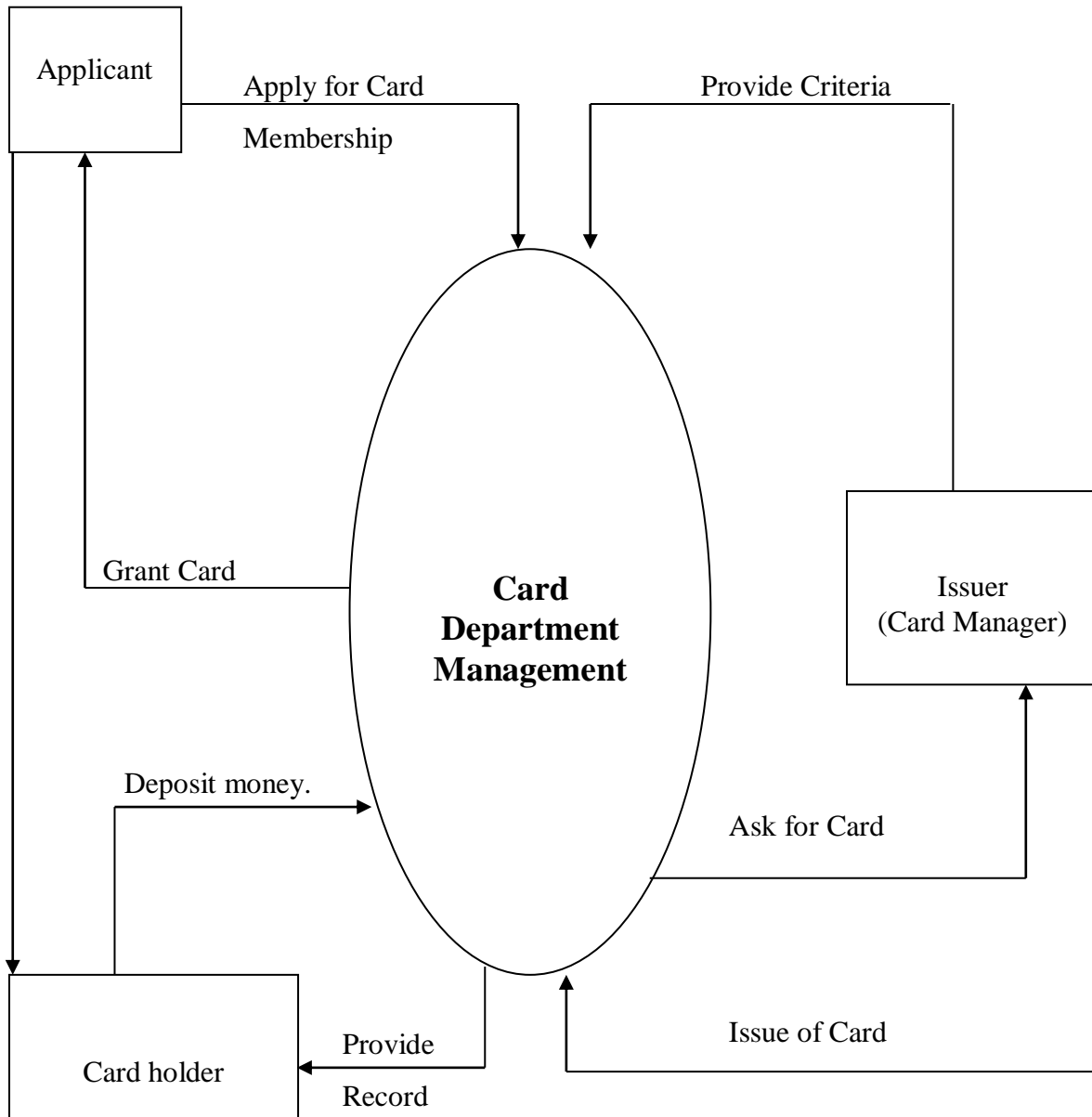
4.9 DFD, DD, ERD for New System

The DFD of New system is presented below both context level and system level diagram.

Context Level DFD of New System

Figure 4.13

Context Level DFD of New Card Management



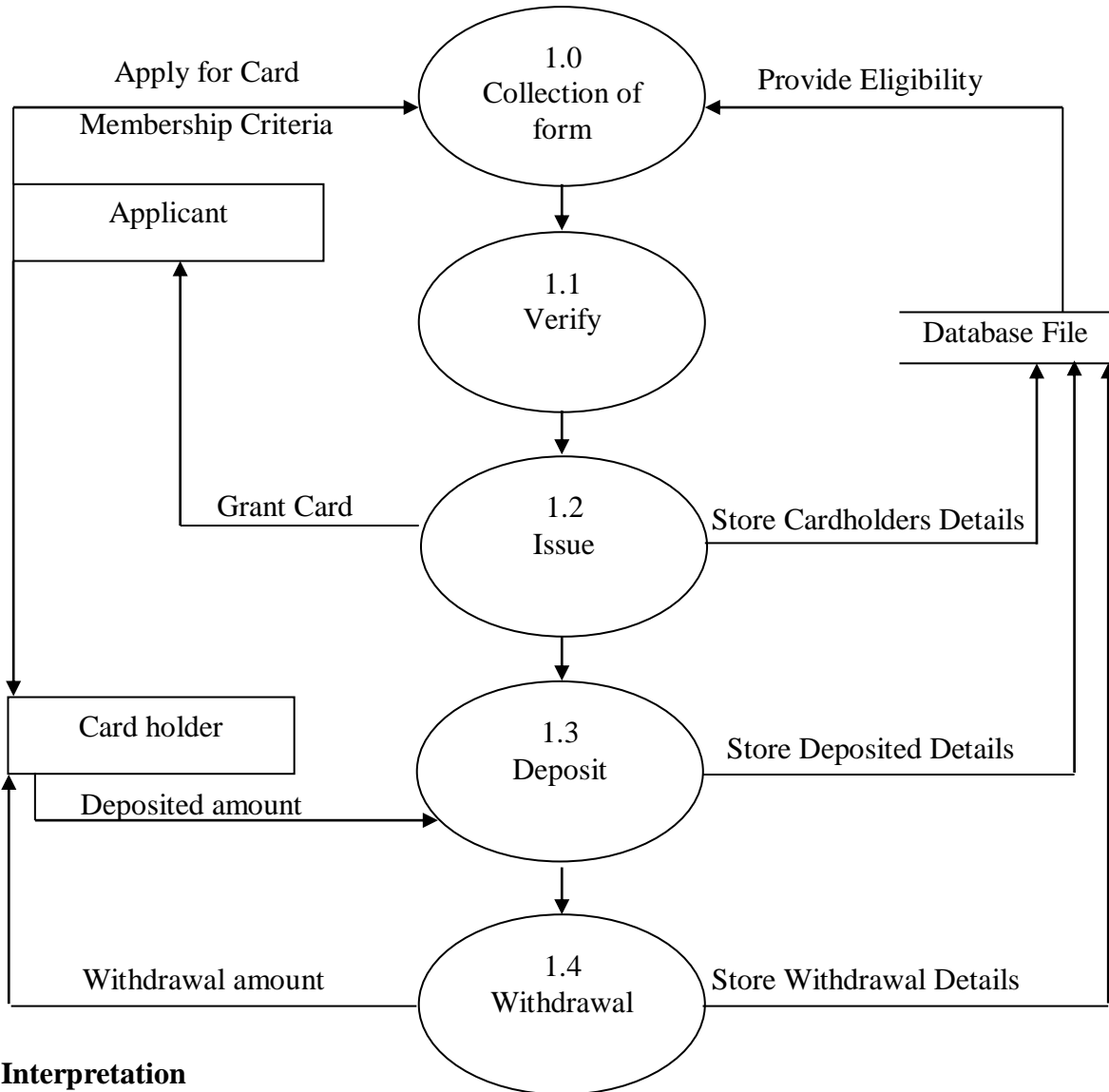
Interpretation

In this system cards holders can deposit money relevant ATM box. He or she also granted for the record for deposit money.

System Level DFD of New System

The system level DFD is same as the existing system except the deposit money recorded.

Figure 4.14
System Level DFD of New System



Interpretation

There are relation to the Card holders and card management department. This is external entity of the Nabil Bank to the update data for the deposited money in added system. The update deposited amount added system provides record to the deposited data base file. And the data base file provide records to Query system levels and this levels provide correct information to the withdraw and deposited department.

On this way the new system keep actual record for the deposited and withdraw of cash.

Data Dictionary

The data dictionary serves as the central storehouse of documentation for an information system. In addition to describing each data element, data flow, data store, record, external entity, and process, the data dictionary documents the relationships among these components. I can obtain many valuable reports from a data dictionary, including the following:

An alphabetized list of All Data Elements by Name

- i. A report by user departments of data elements that must be updated by each department
- ii. A report of all data flows and data stores that use a particular data element.
- iii. Detailed reports showing all characteristics of data elements, records, data flows, processes, or any other selected item stored in the data dictionary.

Some attributes use and their variable are given below.

Table 4.11
Data Dictionary

Attributes	Variables
Name	Character (40)
Address	Character (40)
Government license no:	Number (5)
Supply Date	Character (10)/Number(10)
Quantity	Number (12)
Type of cards product	Character (40)

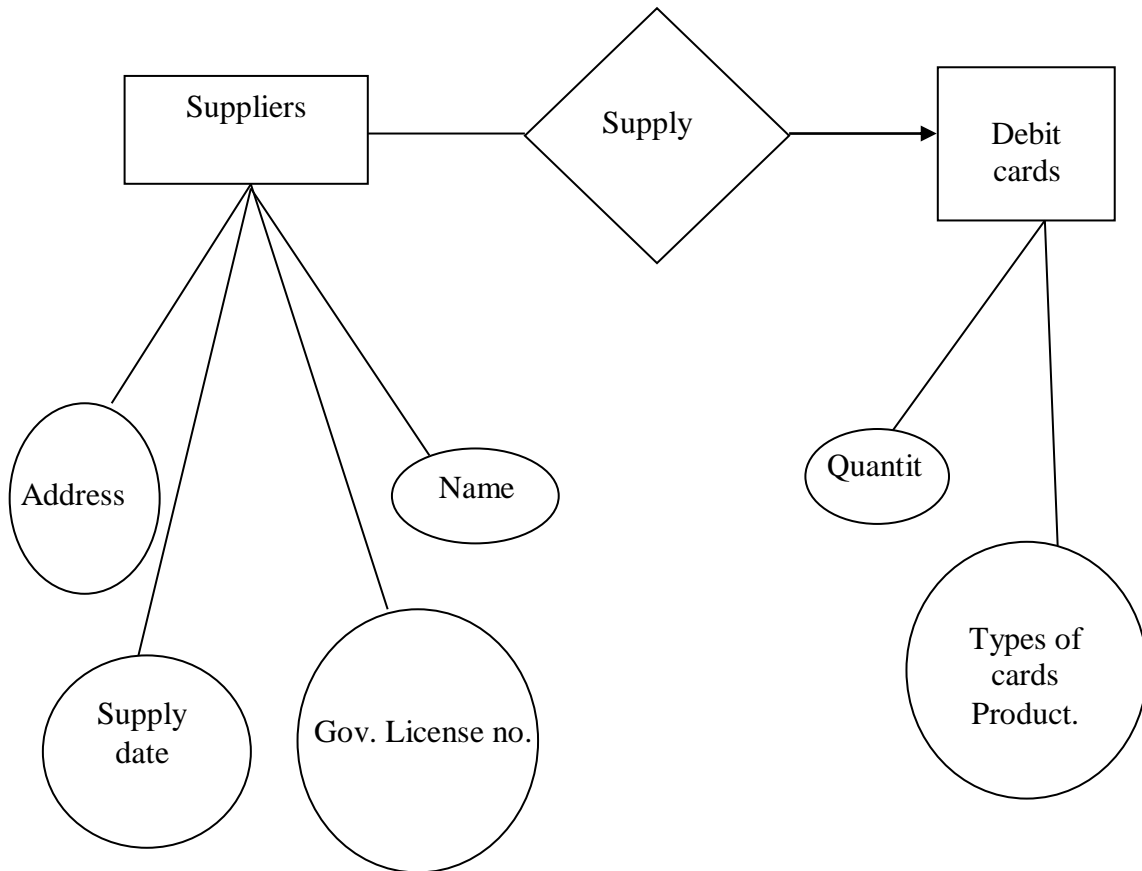
ERD for the Debit Cards Suppliers

There are two entities between relations. This is given below. Suppliers and Cards products are entity and supply is a relation between them (entities).

ERD for Debit Cards Product Supply

Figure 4.15

ERD for Debit Cards Supply

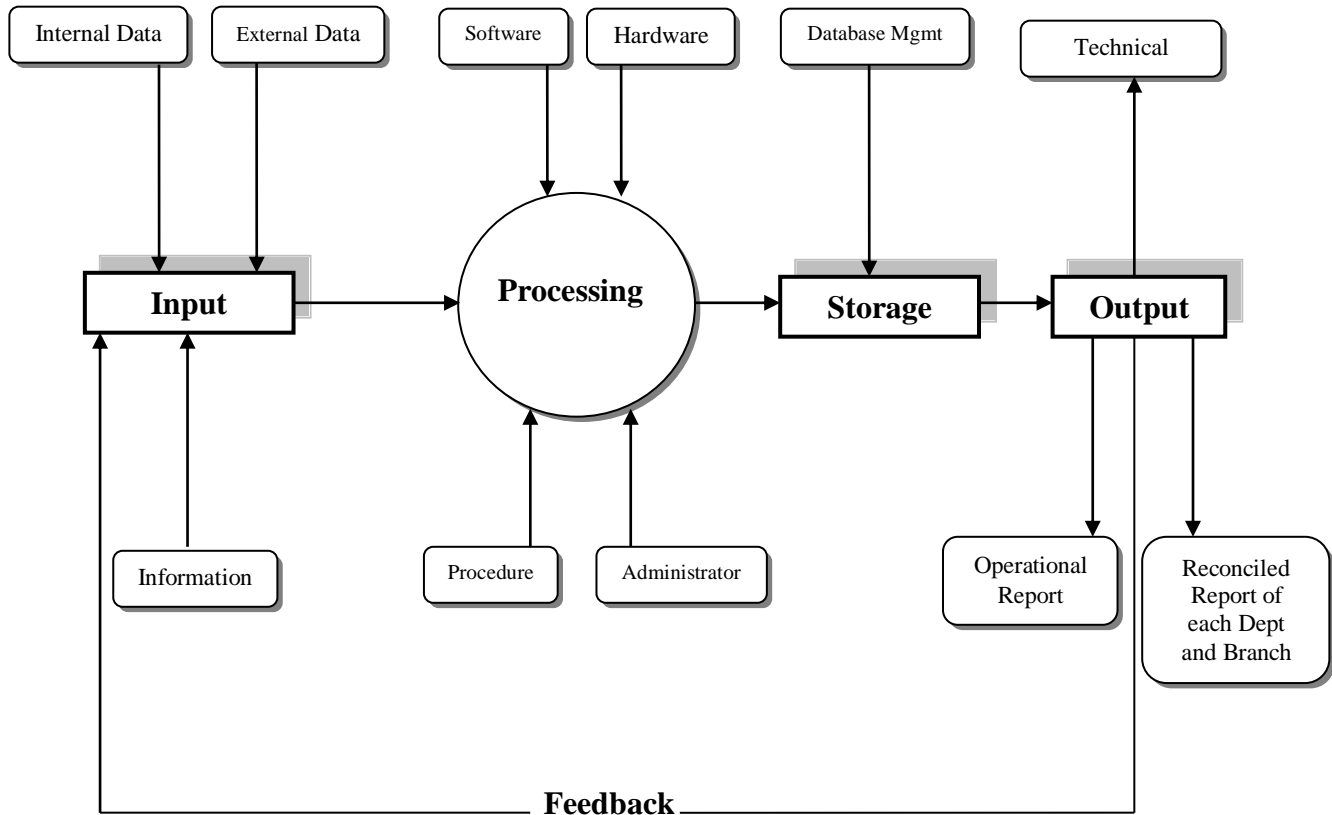


4.10 Input, Database and Output Design

The input is the initial raw data which needs to go under process and after processing the final data is stored in the database management system and finally the output of the result will be obtained. The input, database and output design of the system show the overall design of the new system that works in the organization. Here I have design out the input and output design which helps the reader to understand the overall design of the new system.

Figure 4.16

Input, Database and Output Design



The above figure 4.16 explains the Input, Database and output design of the proposed system of Nabil Bank limited. In the given figure the input source like internal data, External Data and information of various department of the Nabil bank is needed and for the processing of the information system. During the processing the source like software, hardware, and system administrator is needed to perform the data procession using certain procedure. After processing the system administrator goes on storing the data to the database management system called Finacle of the Nabil Bank limited. That stored database can be retrieve and access by the various departments as they got authorized to use it. Finally the output is generated in the form of operational reports, Technical reports of system department and reconciled reports of various department and branches and can be used for auditing purpose as necessary. Last but not the least the positive as well as negative feedback are used as input data for upcoming source of information simultaneously.

4.11 Justification of the New/Proposed System

What about an overall strategy for developing a set of DFD's ? .A set of DFD's is a graphical, top-down model, so most analysts first create the context diagram, then diagram 0, then all the child -diagrams for diagram0, and so on.

Other analysts, however, follow an alternative bottom – up strategy. With a bottom – up strategy, we first identify all functional primitives, data stores, external entities, and data flows. Then we group processes with others related symbols to develop the lowest – level diagrams. Next, we group those diagrams in a logical way to form the next higher level. You continue to work our way up until we reach diagram.

Regardless of which strategy we use, we should apply the suggestions and guidelines. The main objective is to ensure that our model is accurate and easy to understand. Reviewing data and process models with users allows us to obtain their feedback and approval for the logical design of the systems.

This new system work on the basis of above description and can predict the actual figure of money withdraw and deposited amount.

4.12 Cost Benefits Analysis and Feasibility Analysis of New System

A cost benefit analysis is done to determine how well, or how poorly, a planned action will turn out. Although a cost benefit analysis can be used for almost anything, it is most commonly done while implementing the proposed system. the cost benefit analysis relies on the addition of positive factors and the subtraction of negative ones to determine a net result, it is also known as running the numbers.

A. Cost

The cost is one of the important factors that are responsible for whether to install the new system or continue of the existing system. So by the analysis of the proposed system the cost incurred in the new system will be seems little more than existing at beginning but benefit in future as cash can be deposited from the same place where he\she withdraw the

money reducing administration cost i.e. adoption of new system will be low and economical.

B. Benefits

There will be no question of developing new system if there are no benefits so the advantages that we can gain from the implementation of the new system is basically called as benefits of implementing a proposed system. Some benefits can be traced out from the following points.

- The new modified system can accept the deposited & withdrawal amount at one place which will saves administration cost and time.
- The electronic payment system will be easy and quick without waiting in queue.
- The New system is economical, effective & efficiency in work will increase significantly.
- The implementation of New System will more benefit to the customers as well as bank.

Cost-benefits analysis is the process of comparing the anticipated costs of an information system to the anticipated benefits. Cost-benefit analysis is performed throughout the SDLC (System Development Life Cycle) to determine the economic feasibility of an information system project and to compare alternative solutions. Many cost-benefit analysis techniques exist.

This section covers discussion of only the three most common methods:

- i. Payback analysis.
- ii. Return on investment analysis.
- iii. Present value analysis.

Each of the approaches analyses cost-benefits figures differently, but the objective is the same: to provide reliable information for making decisions.

i. Payback Analysis

This is the traditional but important method of screening the projects. Normally, investor thinks that when it will receive its investment and compares the period required receiving the investment with project life. Sometime, investor itself set the period within which it had to recover the investment. In the case of debt financing, investor may consider the maturity period of debt as the period within which has to recover the investment. Thus, the payback period is the expected number of years required to recover the investment of the project.

$$PB = \frac{I}{CF_A}$$

Where,

I = investment cash outlay

CF_A = annual cash flow

PB = payback period

ii. Return on Investment

Return on investment is book rate of return on investment. It is based on the average accounting profit and average investment and it is calculated by dividing the average accounting profit by average investment. It is calculated as:

$$ARR = \frac{\overline{EAT}}{\bar{I}}$$

Where,

$$\overline{EAT} = \frac{\sum_{t=1}^n EAT_t}{n}$$

$$\bar{I} = \frac{I_0 + I_n}{2}$$

\overline{EAT} = Average Income

\bar{I} = Average Investment

n = Project Life

EAT_t = Earning after Tax for t number of years.

I₀ = Book Value of the investment at the beginning

I_n = Book Value of the investment at the end of n number of years.

iii. Net Present Value

This is widely used discounted cash flow technique of capital budgeting. The previously discussed methods – payback period and accounting rate of return – do not take the time value of money into consideration. But this technique does. While evaluating the capital projects, in this technique, benefits of the project measured in terms of cash flow are discounted. In this technique, benefits of the project measured in project are deducted. The remaining value is known as net present value. More precisely net present value of the project is the difference between present value of cash inflow and outflow. Mathematically, it is given by:

$$NPV = \frac{CF_1}{(1+k)^1} + \frac{CF_2}{(1+k)^2} + \frac{CF_3}{(1+k)^3} + \dots + \frac{CF_n}{(1+k)^n} - CF_0$$

Where,

NPV = Net present value.

CF₁, CF₂, CF₃ are expected cash flows in first years, second years and third years respectively.

K = cost of capital.

n = project life.

C. Feasibility Analysis

A feasibility analysis is an important tool which helps to assess the viability of starting a new system, or re-organizing or expanding an existing system. It provides important information needed to make the critical decision of whether to go forward with a development of new system or not. The need for system modification of the new system is feasible and suitable only if it can be successfully implemented. Any system which cannot be implemented is just a waste of time and resources and it will be definitely not feasible for the organization.

Hence, all system requests though worthy and valuable, should be first analyzed for its feasibility before proceeding to system development or modification. The consideration of 3 types of feasibility should be considered for any proposed system.

- **Technical Feasibility**

Technological feasibility is carried out to determine whether the company has the capability, in terms of software, hardware, personnel and expertise, network channels feasibility to handle the proposed system so the proposed system is can be easily modified in the existing system of the Nabil Bank ltd. As part of the present investigation, it was found that no extra technical support is required from the modification of the existing system.

- **Economic Feasibility**

The proposed system can be developed with the minimum investment and maximum output. By the economic analysis of the existing system the new system is economically feasible for the implementation. Hence, the budget allocated by Nabil Bank ltd is enough for the proposed project and does not face any problems in its making process. The economic feasibility can be measured by cost benefit analysis that means how much cost is required for the installation of the proposed system and the benefit that can be made after its implementation.

- **Operational Feasibility**

In the existing system administrator face a lot of problem regarding the data collection and recording and reports preparation for the system administration thus in the new management information system the big effort of the existing system has been reduced by the installation of the reconcile department. Thus the implementation of the proposed system will be effectively operated.

4.13 Major Finding of the Existing System

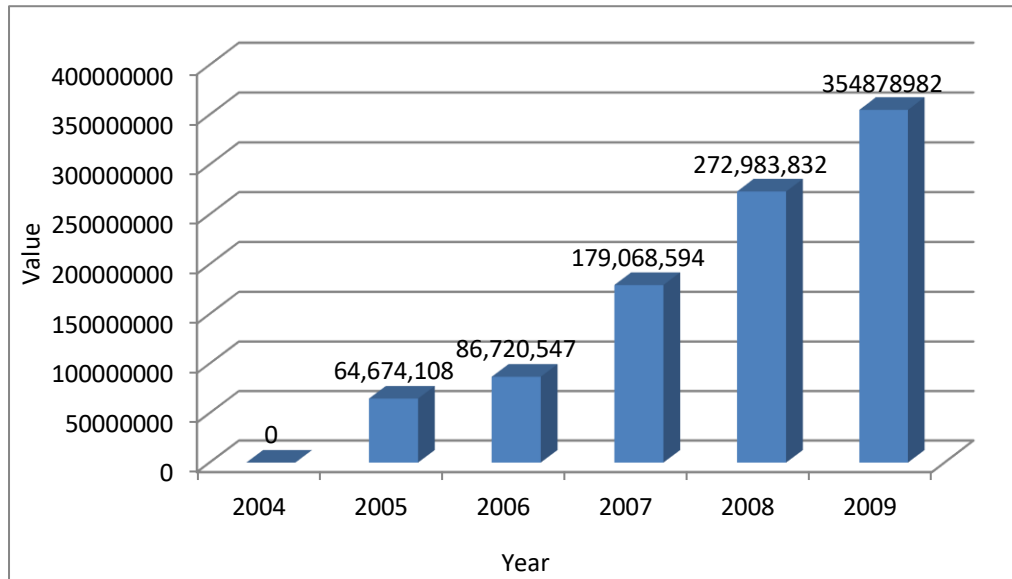
Here is one problem which is facing by the cards holders that is the accuracy balance system is corrupted and sometimes the money is lost on hard report through ATM box. Even if a lot of card holder using the ATM banking system which is much faster and can eligible to take money from anywhere.

Table 4.12
Money Transaction by Debit Cards of Nabil Bank

Years in AD						
Particular	2004	2005	2006	2007	2008	2009
Value	—	64,674,108	86,720,547	179,068,594	272,983,832	354878982
No. of ATM	11	13	14	31	34	51

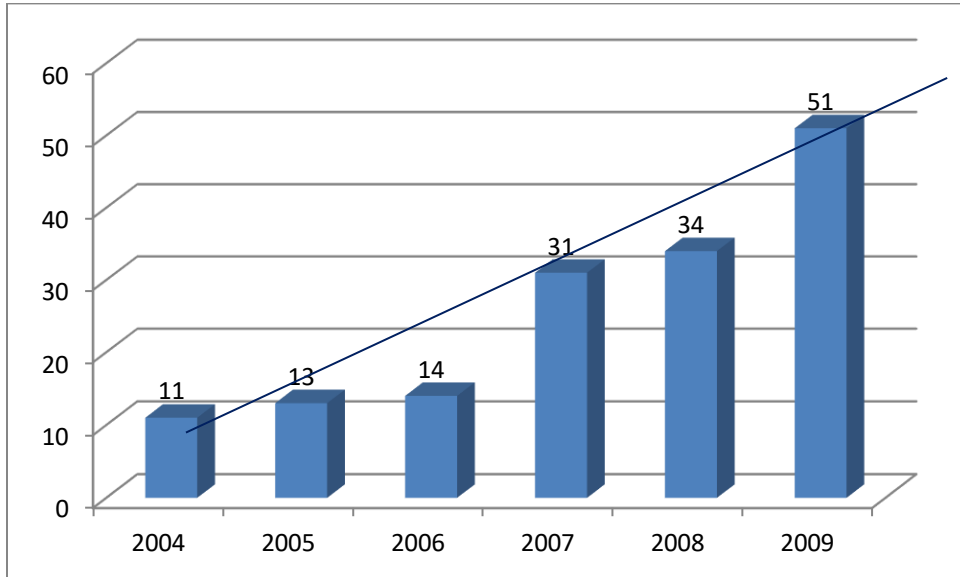
The above table is representing in bar diagram as below which is diagrammatically study for it. In the below bar diagram clearly shows that the record of how much money transition happen these years through cards holders. The horizontal line shows the time period and the vertical line shows the transaction currency. The above table shows two type of relation one is value and other one is No. of ATM boxes.

Figure 4.17
Transaction of Money through Debit Cards



The below figure shows the no. of ATM boxes are using these time period. There is dual relation between bar diagram and the trend line projection.

Figure 4.18
Number of ATM Boxes Uses



The horizontal line represented the time line and the vertical line or Y-axis shows the No of ATM boxes. This is represented as above bar diagram.

No. of Cards Issued by Different Bank

A lot of cards are issued by the different commercial banks now these days and previous years due to easy and fast handle. The system of technology is rapidly growing up and we all are beneficial from these.

Here is one data represent here which clearly shows the diagrammatically structure of the no of cards issued these years. This is given below.

Table 4.13

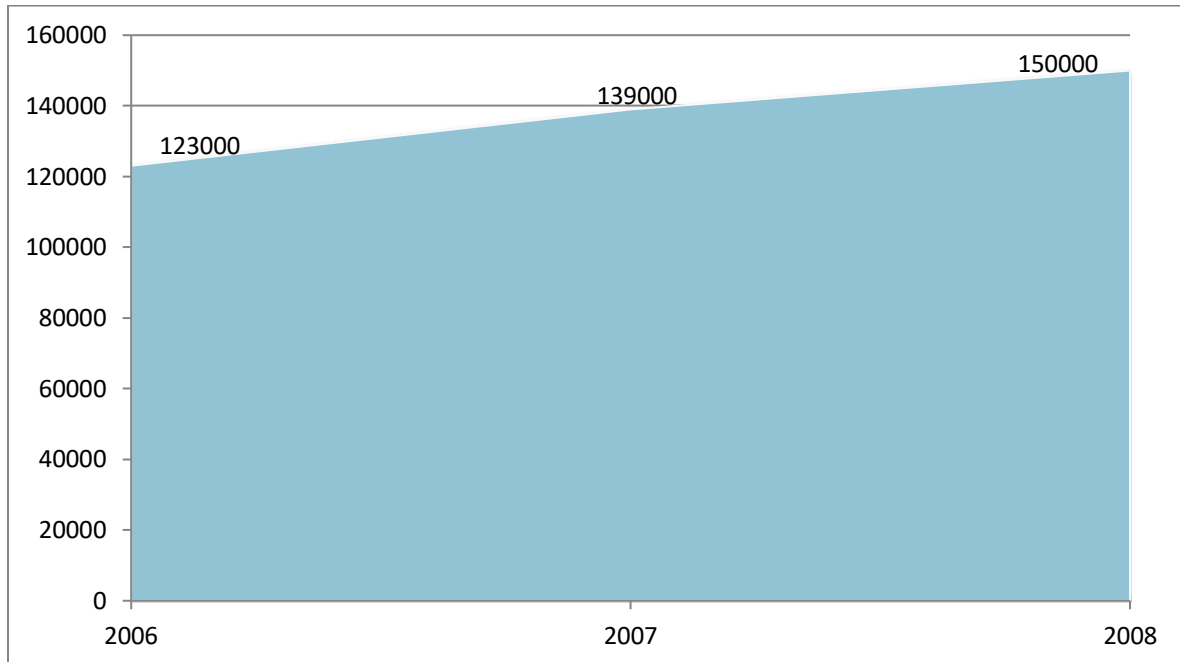
No. of Cards are issued by Different Commercial Banks

Year	Number of Cards Issued By various Banks
(2006)	123000
(2007)	139000 (Approximately 140000)
(2008)	150000

The above data shows the chart area which is mention below.

Figure 4.19

No. of Cards are issued by Different Commercial Banks



The horizontal line shows the time period from 2005 to 2008 and there clearly shows the data level of this cart area how many Clint using debit cards.

On the basis of the survey major findings of the study are as follows:

- Most of respondents (90%) think that M.I.S information plays a vital role in the operation of the business.
- Most (50%) of the data-information is collected from both manual as well as computer, 20% manual entry and 30% computer entry.
- Most(60 %) of the customer do not use online e-banking services like ATM, ABBS, Tele Banking, SWIFT, etc..
- 67% respondent use of required data information through network (LAN & WAN) for MIS purpose frequently and 13 % never access the data through network.
- Most of the respondents (91%) need MIS Department of quick and correct Decision Making at present or in the future.

- Most 60% of the respondents are satisfied with the existing electronic payment system and most (50%) of the respondents want immediate upgrade existing electronic payment system with the additional feature of deposit (settlement) system.
- Many respondent think due to lack of computer knowledge of MIS, Hardware & Network and online banking services it will be quite difficult to implement full fledged online electronic banking in Nepal.
- Many respondent wanted to make their fund transfer, bills payment online, so that they can save their time and cost with minimum online charges.
- The monetary transaction by the debit cards of the Nabil Bank Ltd. drastically increases its income by years 2005A.D to 2009A.D is nearly 65billion rupee to 355billion rupee through 11339 debit card holders to 94019 debit card holders from 13 ATM boxes to 51 ATM boxes respectively.
- Also from the forecasting model, it forecast that there will be **180055** number of debit card holder in 2014 A.D.
- Majority of the users of the MIS consider that MIS to be important and helps in decision making.
- Due to high cost and requirement of technical manpower, MIS not implemented in the organization.
- The managers and all decision makers not using modern MIS and various software regarding decision making and problem solving.
- The factors which will improve the utilization of MIS are: “Good communication channel”, “Training to end user”, “Training to software personnel”.
- The main problem of existing system is that it cannot accept deposited money.
- NABIL is using ELECTRA CARD SYSTEM software for card management system which is effective for the overall development of the bank.
- NABIL has installed core banking system i.e. FINACLE software which is giving a good performance for overall banking transaction.
- The sharing of the networking resources (VSAT, Fibre, RadioLink, Subisu, Merchantile) among the different branch is centralized in head office through which communication is done.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Electronic Card is easy for money transaction from anywhere. It is safety and light. I would like to give thanks for technology at first as well as computer technology. In this way Nabil Bank is also using ATM system and using of cards system since few years.

A Card is the substitute of cash or travel cheque. It has gained immense popularity within a short period due to the maximum service and benefits offered by the issuer. Still there has been limited use of credit cards due to the lack of knowledge. In Nepal, there are many banks involved in the field of card market. Nabil bank is the pioneer bank for credit card. This bank's performance is very profitable and is very good indeed. However, since there are more than three banks those provide this service it may sometimes create the situation of no choice to the merchants and cardholders because in case these banks increase the rate of commission or cardholder subscription fee.

From the data of five years, we can summarize that every year the number of card holders has been increasing. Thus, we can say that this is in increasing trends. This fieldwork report is based in five years data and observations. While preparing report, I observed that the issuance business of Nabil bank is totally dependent upon the acquiring business of the Nabil bank. A new competitor bank Nabil has been added to this business. Nabil bank has limited market shares and progressing economic growth and also attentive marketing strategy. Nabil bank has been providing its services from the last 26 years and has captured a good market which is only possible due to new technology used and good hospitality. It is obvious that Banks in future cannot survive without the support of information technology. This is not a time to think whether to computerize or not, but to think how soon we are going to be connected to the online services. From all indications, Banks should to be prepared to exploit the opportunities that globalization and financial liberalization provides. In these contexts, the environment in which banks are operating

in Nepal and to the compulsions that work to make computerization in banks an imperative. Computerization of branch operations, controlling offices and the head offices has been going apace particularly sharply in recent times since that is the only way by which senior management's in banks can gain information on the size of operations on a daily basis.

The banking industry is clearly cognizant of the imperatives of financial liberalization and has therefore attempted to computerize branches that are located in commercially important centers across the country. The large functional and geographical spread of banks has led to a sharp growth in the number of accounts and in the areas of operation of banks. This has necessitated switchover from hard cash to paper based instruments. The advent of the Internet and the popularity of personal computers presented both an opportunity and a challenge for the banking industry. Now that its customers are connected to the internet via personal computers, banks envision similar economic advantages by adapting those same internal electronic processes to home use.

With the help of online banking service customer can check his account details, transfer his money, and pay their bills through the Internet within a small span of time. As Internet destroyed a notion of space and time because of 24-hours computer driven system, business companies provide fast services to the clients, who can enjoy the convenience of shopping at any hour, anywhere in the world. Another important benefit of the online services is the expansion of market. It enables the trading organizations to interact with new and different suppliers and customers. Small and medium enterprises have endless possibilities to enter into the export market, which cannot be supported by the local or national markets. Once Nepal adopts these new opportunities and innovations offered by the IT, services based industries would burgeon.

As Nepal has entered the global market by getting the WTO membership, the transactions system will be more voluminous. The trade and commerce sector is growing up in Nepal. Since the banking transactions increase every year, the needs of the automated remittance system also increase which force to provide more facilities to the e-business customers in a reliable and timely manner.

5.2 Conclusion

Management Information System clearly defines here by one data flow diagram and we can predict decision in accuracy and in balance. The important role of MIS in this computerized era is easily forecast by business studies students. Nabil bank is also using this system and predicting decision. Approximate 94,000 cards users are in Nabil Bank.

NABIL Bank is the first bank that introduced credit card as new electronic payment system in Nepal. Because of the NABIL Bank, we are enjoying the modern technology. Nabil bank play very important and vital role in the business of electronic payment system in Nepal. From the study of electronic payment (cards) of NABIL, we have concluded that there is a rise in the income of NABIL Card Department in both the acquiring and issuing coverage as well as number of card holders.

Since these banks (Credit Card Issuers) co-operate with the latest technologies of Master and Visa Card International, which seems quite expensive, only the three banks has been able to provide the service of credit card though there are lots of commercial banks in Nepal. From the study, we also concluded that there is no any big loss involved as compared to the loan section and it is not a complex task. Hence, to sum up, Electronic payment system is an important banking transaction of modern economy.

According to the survey done by the researcher only 50% are satisfied with the existing electronic payment system. Rest of the 95% respondents wants immediate technical improvement in their services system. Respondents feel the bank should imply online services to provide better facilities to them .While asking about the difficulties faced with the traditional banking respondents complained about the time delay as the main factor besides staff behavior and reliability.

Due to the time factor online banking services seems invisible in the banking sector. At present SWIFT is the only service which is used by all the commercial banks while Debit card facility is given by only one bank. We can see the practices of online banking by some of the banks .They are using ABBS system to transfer money. This system is

catching up fast, as per research, 9 out of 17 banks are already using this service. The main aim of introducing online banking is to make the transactions smooth and easier.

Regarding the advantages to the customers they can transfer their fund, pay their bills or installments of loan online just pressing some keys of the personal computers, so that they can save their time and cost. As the online bill concept is completely new to the Nepalese society it will catch up the market as soon as introduced. Online services will drastically enhance the efficiency of decision making or processing of any job. When the respondents were asked about the charges to be made on the online bank services, 100% of the responded with no charge required. Bank can provide this facility free of charge so that the customer will attract towards this service.

Management information system has been emerged as a new concept in the field of management to solve the problems generated by complex organizational structure and increased complexities of management due to industrial and technological revolution. MIS is defined as a computer-based information system, which provides information support of decision-making in the organization. MIS gives information through data analysis. After the restoration of democracy; the Government of Nepal launched an economical liberalization policy. This has led to an increasing number of commercial banks in the country, due to such increment of commercial banks, competition also increased among them, which have resulted in enhanced services to the customers getting more advantage that is competitive. This is only possible through proper information technology. The each and every entity set of the card department are identified and shown in Data flow diagram and Entity relationship diagram as the user can view and identify the system easily and quickly.

The system is expected to fulfill the information needs of an individual, a group of individuals, the managers and the top management. The MIS satisfies the diverse needs through a variety of systems such as Query Systems, Analysis Systems, Modeling Systems, and DSS and also helps in Strategic Planning, Management Control, Operational Control, and Transaction Processing. MIS is viewed and used at many levels

by management. Because MIS supplies decision makers with facts, it supports and enhances the overall decision making process. MIS also enhances job performance throughout an institution. In Nabil Bank Ltd. at the most senior levels, it provides the data and information to help the board and management make strategic decisions. At other levels, MIS provides the means through which the institution's activities are monitored and information is distributed to management, employees, and customers. Management Information System is the backbone on which logical business decisions are made in all types of business organizations. Applying this same logic to a bank, we can safely say that a bank must have good Management Information System as a minimum to survive and prosper in this exceedingly competitive world.

If the new modified system is implemented it will reduce the cost as well as time. In the existing system takes lot of time and accuracy regarding the recording the data. So if the new system is implemented the new electronic payment system as well as administration process will become easy and take a less time as a result there will be no difficulty in reports generation. Also it is economical and effective which makes efficiency in work and performance will increase significantly.

5.3 Recommendations

As the study indicated that we have a vision of an integrated payment and settlement system for the country with a network of branches with straight through processing as the goal. For such system to be functional we need to have standards based solutions for the banking and financial sector from multiple vendors. The standards based solutions should necessarily consist of open system architecture, with scalability as its main feature for taking care of future volumes in growth .The IT industry should closely collaborate with banking sector in providing such services at cost-effective prices. Integrated payment and settlement system should be a better step in this direction .Many more steps need to be taken in future. E-commerce will add new dimensions to information highway and thus lead to higher business volumes, efficiency and profitability. The IT industry should be in readiness to provide such full proof solutions of security including the encryption of data based on internationally recognizes security standards. After studying the various aspects

of the management of the information system in the NABIL BANK Ltd, following points are recommended for the effective management information system:

1. The bank must create a separate department i.e. MIS department for the effective management of the information manned by qualified professional and equipped with latest hardware and software resources.
2. The present network system (LAN) must be utilized from every aspect. All the information or data required for the decision making must be shared by all the users and unique number must be given for the specific information so that it will be easier to trace.
3. As per the information requirement the specific MIS software has to be development and installed in the office. To Intensive training must be given to all the users to operate the software to fix the minor problem themselves.
4. Communication flow between the branches and head office has to be smoothen and streamlined. The WAN (Wide Area Network) has to be developed for the better communication between the branches outside Kathmandu with its head office.
5. A core group must be formed at MIS department including the user from other department to monitor and supervise the MIS performance.
6. SWIFT is the only service which is used by all the commercial Banks while Debit card facility is given by only one Bank till date . ABBS system is catching up fast, 14 out of 29 banks are already using this services.
7. On line payment system should also give the priority as most of the respondent wanted to make their fund transfer online, so that they can save their time and cost, but only few of the respondent shows interest in online bill payment to escape from the long queue of the bank.
8. Awareness programs should be conducted to customer as from research shows many customers think due to the lack of computer knowledge it will be quite difficult to implement fully fledged online payment system in Nepal. As per the result 20% of the respondents are susceptible about the security of the online services.
9. Bank should maintain good security system while making electronic payment because there is one threat in electronic banking that we face but is rarely

mentioned openly, namely the fear of hacking and tempering of data. Secrecy is the essence of banking transactions. The security products both hardware based and application software based should address the twin issues of taking care of customers interests and also ensure secure funds transfer can be minimized by Central Vigilance Commissioner (CVC) should direct all banks to compulsorily offer Electronic Clearing Services (ECS) to their customers. Another significant contribution of Credit Information Bureau (CIB) to examine data warehouse and data mining would come to play a crucial role in giving such information of bad debtor while giving them huge amount of loan without getting into legal hassles.

10. In the developing country like Nepal, most of the urban citizens are under middle class category. Hence, the bank should cut off its service fee and make it more affordable.

We came to know that credit card business involves high investment and at the same time high risk as well. So the proper management is necessary. From the study, we came to know that the credit card system is used only in high standard places like five star hotels, departmental stores and so on. If NABIL credit cards could be used in paying bills of telephone, electricity, accepted by stores and other general works then more people will be attracted in e-Card. For this NABIL will have to influence the merchants to accept NABIL Card. The main problems of credit card business are risk and disputes associated with the operation. Most of the risk factors are possible to be eliminated but the parties involved should be careful and alert while doing transaction on credit card. Thus, NABIL Bank should give training and orientation classes to the parties involved. We can find that credit card service has not taken place in media. In addition, people do not have any interest about credit card. Therefore, NABIL must advertise its cards as greater the number of cardholders greater the transaction and increment in profit. Hence, bank should conduct lots of promotional campaigns. Some staffs are not genial, cooperative which might hinder the image of the bank. So the bank must correct staff behavior.

So far, services provided by the NABIL Bank are satisfactory. Keep up the good work.

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Website

www.nbl.org.np

APPENDIX

Act: The rules in which all are limited and bounded.

Benefits: Membership – based, non – financial rewards offered to attract and keep employees; payments in addition to pay based on employment and position in the organization.

Computer modeling: A complex computer program that simulated the work environment.

Data: A collection of numerical sample study from population or exact

Decision: A conclusion through brainstorming or discussion from group.

Dictionary: Where, the meaning we find or the collection of meaning of words.

Effectiveness: Attainment of the goal.

Efficiency: The ratio of inputs consumed to outputs achieved.

Electra Card System: Software for card management system which is effective for the overall development of the bank.

Feedback: Knowledge of results.

Finacle: Software which is giving a good performance for overall banking transaction.

Information: A message collecting in management in circle.

Palling: friendly

Process: Collection of activities that take inputs and create outputs.

Query: Investigation about the matter or inquiry.

Research: A systematic and goal – oriented investigation of facts that seek to establish a relationship between two or more phenomena.

System: A network of interrelated components.

Technology: A scientific study which become accurate and performs new tests for user or consumer.

Time study: Analysis of task to determine the elements of work required to perform it, order in which the elements occur, and the time required to perform them.

QUESTIONNAIRE

Please tick, whichever is appropriate to you.

1. Do you think M.I.S information is vital in operation of the business?
High Medium Low
2. How do you collect the data information?
Manually Computerized Both
3. Do you have knowledge of Online e-banking services?
Yes No Partial
4. Do you get required data information through Network (LAN & WAN) for MIS purpose
Mostly Frequently Never
5. Do you need separate MIS Department for Decision Making?
Yes No
6. Do you satisfied with existing electronic payment system?
Yes No Partial
7. Do you need to upgrade existing electronic payment system?
Yes No Partial
8. What are the problems faced by you in existing electronic payment system?

9. What extra new features do you want to add in new system for more convenient?

10. Number of debit card user, monetary transaction through debit card and number of ATM boxes use in the following years?

• 2005			
• 2006			
• 2007			
• 2008			
• 2009			