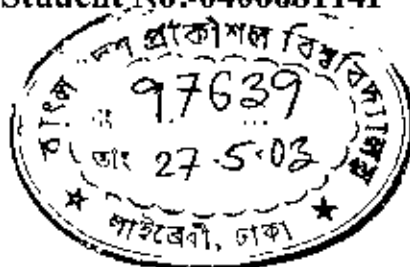


DEVELOPMENT OF A MANAGEMENT INFORMATION SYSTEM FOR THE INDUSTRIAL INVESTMENT OF A COMMERCIAL BANK IN BANGLADESH

**A Project Thesis
By**

MD. ABU SAYED
Student No:-040008114P



A PROJECT THESIS PRESENTED TO THE DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING, BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ENGINEERING IN ADVANCED ENGINEERING MANAGEMENT.

May 2003

**DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING
BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA**



DECLARATION OF THE CANDIDATE

It is hereby declared that neither this thesis nor any part thereof has been submitted or is being concurrently submitted anywhere for the award of any degree or diploma or for publication.



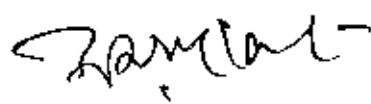
Candidate

Supervisor

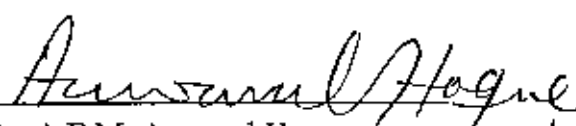
RECOMMENDATION OF THE BOARD OF EXAMINERS

The Board of Examiners hereby recommends to the Department of Industrial & Production Engineering, BUET, Dhaka acceptance of the Project Thesis as the style and contents, "**Development of a Management Information System for the Industrial Investment of a Commercial Bank in Bangladesh**", submitted by **Md. Abu Sayed**, Student No. 040008114P, in partial fulfillment of the requirements for the degree of **Master of Engineering in Advanced Engineering Management**

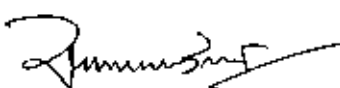
Chairman & Supervisor

: 
17/05/03
Dr. Mahiuddin Ahmed
Professor & Head
Department of Industrial and
Production Engineering, BUET, Dhaka

Member

: 
17/05/03
Dr. A.F.M. Anwarul Haque
Professor
Department of Industrial and
Production Engineering, BUET, Dhaka

Member

: 
Dr. Md. Golam Mohiuddin
Professor
Department of Industrial and
Production Engineering, BUET, Dhaka

CERTIFICATION OF RESEARCH

This is to certify that the work presented in this Project Thesis is the outcome of the investigations carried out by the candidate under the supervision of Dr. Mahiuddin Ahmed, Professor & Head, Department of Industrial and Production Engineering of Bangladesh University of Engineering and Technology, Dhaka, Bangladesh.

Supervisor



Candidate

ACKNOWLEDGEMENT

The author wishes to express his sincere gratitude and profound indebtedness to his supervisor Dr. Mahiuddin Ahmed, Professor & Head, Department of Industrial and Production Engineering, BUET, for his continuous supervision, guidance, suggestions to carry out this project.

The author expresses his thanks to all the officials of different banks who help to collect different information about the investment/ loan procedure of the bank. The author's special thanks to all of his friends for their encouragement and valuable technical supports.

BUET, Dhaka

Author

ABSTRACT

As a service oriented industry it is essential to give prompt and quality service to the client of a commercial bank. It is also important to operate the organization dynamically to meet the challenge of the national and world market. To meet this requirement faster information dissemination is the best option for a modern organization. Computer based MIS is one of the useful ways to convert the traditional information system or process to an efficient system. Investment division is one of the most important business concerns of a commercial bank. It is very much essential to have a common database system to develop computer based MIS in such division. In this paper MIS of the investment/loan system of a commercial bank has been developed by using MS Access application package of Microsoft Corporation. By using this generalized model, the investment or loan & Advance or credit division of a bank, may be benefited. Dealing officer, middle management or top management of the bank will be able to access different information of the bank within a very short time by using this model. To make it more powerful & secured software SQL server in addition to Oracle platform may be used, from where through networking all the branches & head office may come into a common database network. As a result only one time data or information will be inputted in the database from different position of the whole investment procedure. It will be also possible to give different privilege at different level as per decided by the management or system administrator. So by studying this paper a door will be opened to use and future development of the database of Investment/Loan division of a commercial bank in Bangladesh.

CONTENTS

Chapter 1

INTRODUCTION

1.0 Introduction

1.1 Banking Industry in Bangladesh

1.1.1 Types of Bank Operating in Bangladesh

1.2 Computerization of Banks

1.2.1 On line Banking in Bangladesh

1.3 Computerization of Investment Business Process in Bank

1.4 Objectives of the Study

1.5 Methodology

Chapter 2

INVESTMENT PROCESS IN BANK

2.0 Investment/Loan & Advance

2.1 Study of Project Proposal for Investment

2.1.1 Cost Estimation of the Project

2.2 Study of the Project

2.2.1 Project Cycle

2.3 Investment Processing Flow and Decision Making Diagram of a Project Proposal

Chapter 3

LITERATURE STUDY ON SYSTEM ANALYSIS, DESIGN AND DEVELOPMENT OF MIS

3.0 Management Information System (MIS)

3.1 System Analysis Technique

3.1.1 Database

3.2 Database Terminology

3.3 Relational Database

3.4 Entity Relationship Model

3.5 Dataflow Diagram

3.6 Database Management System

Chapter 4

INVESTMENT SYSTEM ANALYSIS

4.0 Functional Analysis of the Project Financing

4.1 Source of Information

4.2 Flow Diagram of the Industrial Investment Model for MIS Development

4.2.1 Preliminary/ Identification Stage of a Project Proposal

4.2.2 Processing Stage of the Project Proposal

4.2.3 Investment/Disbursement & Monitoring Stage of a Project

4.3 E-R Diagram to develop MIS

4.4 Database for MIS of The Industrial Investment/ Credit Division of a Commercial Bank

Chapter 5

DEVELOPMENT OF THE SYSTEM

5.0 Development of the System

5.1 Storage of Data

5.2 Query

5.3 Graphical Presentation

5.4 Report

5.5 Benefit of this Computerized MIS in Investment/Loan Division of a Commercial Bank

Chapter 6

TEST RUN, RESULT & DISCUSSION

6.0 Test Run the Program

6.1 Result

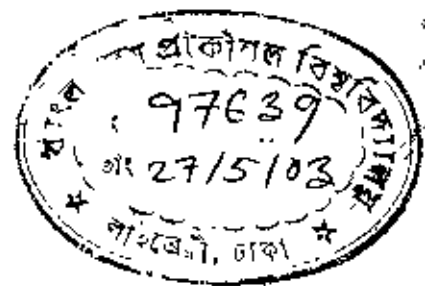
6.2 Discussion

6.3 Scope & Limitation

6.4 Conclusion

REFERENCE & ANNEXURE

CHAPTER-1
INTRODUCTION



1.0 INTRODUCTION

MIS is an abbreviated form of Management Information System. MIS is an integrated man-machine system, which collects, maintains, correlates and selectively displays formation in the proper time frame consistently, to meet the specific needs of various levels of management, in order that decisions could be made and action taken for fulfilling the objectives of an organization. All organizations irrespective of size have formal or informal MIS. Large organizations like bank, corporate bodies may have dedicated organizational entity for this [6].

Bank is a financial institute. Banks are basically service –oriented industries. They receive deposits from the depositors (customers), and invest a bulk of those deposits to the parties (customer), which is the major source of profit of a bank. The banks earn profit also by the way of rendering other services to their customers. The success and failure of a bank lies on the efficiencies of services they provided.

With the advent of cheaper computer and software development tools all foreign banks and some local banks have computerized their general banking system. Local banks are also planning to implement computerized investment system. MIS is becoming more user friendly and effective. Modern computer –based MIS is basically a huge database with access facility for many users ranging from lower level managers to top executives.

1.1 Banking Industry in Bangladesh

The banking system in Bangladesh is made up of 9 nationalized banks, 31 domestic private banks (of which 5 are Islamic Banks) and 12 foreign banks (including one Islamic bank). Bangladesh Bank regulates all banking institutions, including the nationalized commercial banks (NCBs), other government banks (development finance institutions and agricultural banks), domestic private banks and foreign banks. Collectively, these banks make up the "scheduled" banking system. As in many countries, the central bank is controlled by the Ministry of Finance. It is not independent. Bangladesh Bank is headed by a Governor, who reports to the Secretary, Finance Division of the Ministry of Finance.

According to the Bangladesh Bank Annual Report 2000-2001 [page 32 *Sharon* 3.8, *Expansion of the branches of Bank*] total number of Bank Branches is 6156

1.1.1 Types of Bank Operating in Bangladesh

There are five types of Banks now operating in Bangladesh

- ☐ Nationalized Commercial Bank
- ☐ Private Commercial Banks
- ☐ Foreign Commercial Bank
- ☐ Specialized Bank
- ☐ Islamic Bank.

Major portion of the national banking activities is done by the four national banks viz. Sonali Bank, Janata Bank, Agrani Bank, and Rupali Bank. These banks deal almost 59% of the overall bank deposits. The private commercial banks and the foreign banks have 34% and 7% of the total deposits respectively [12].

There are five specialized scheduled banks. These banks mainly focus on financing different sectors like agriculture, large industrial projects and SMEs

There are about thirty one private banks in the country [12]. Most of them have very limited coverage, mainly in the major cities of the country. However, several private banks have expanded their operations up to district and sub-district level. All most – all of the private banks are very efficient in their general banking operations. Many of them have computerized general banking operations.

There are twelve private foreign banks in the country. They have very few branches. Their operation is targeted towards the upper strata of the customers. However, these banks have very efficient operations both in general banking and loan financing through their global computerized operations.

Apart from scheduled banks in the country, there are four nonscheduled banks viz. Grameen Bank, Ansar VDP Bank Ltd, Karma Sangsthan Bank and Bangladesh Samabay Bank Limited.

1.2 Computerization of Banks

Banking sector is one of the very important financial and service sectors for the economy of the country. To meet the growing demand for rendering prompt and tailor made services to the customers, the bank exerts its efforts continuously to automate all sorts of transactions in the branches. Many of the banks, are now doing their business activities through computer automation but a few of them is computerized in investment banking. However, most of these organizations/ institutions are trying to convert their entire system under a common computer domain. In that case, MIS is one of the important tools to convert the traditional organization management system into a common database system from where management will be able to access all the related information as and when they require just only by clicking simply one or two buttons of the computer keyboard.

1.2.1 On line Banking in Bangladesh

Nationalized Bank

None of the Nationalized Commercial Banks (NCBs) has any online banking facilities. The major strength of NCBs is their presence at the grass-root levels. Among the nationalized banks – Janata Bank has progressed most with respect to the use of information technology.

Private Bank

Local private banks are coming up with new ideas. They are trying to improve their market share by providing better service through the use of information technology.

Almost all of the private banks are using automated system for keeping records of transactions and for generating reports. But hardly any of those banks has introduced online banking. Among the private bank Prime bank is the pioneer to introduce online banking.

Foreign Bank

Most of the foreign banks are giving the online facility to the client. Among the foreign banks, Citybank N A , Standard Chartered and HSBC are the leaders in providing online banking to their customers

1.3 Computerization of Investment Business Process in Bank

Industrial Investment is one of the important departments for a bank. All most all the commercial banks maintain this department as a main business activity although the name of the department could vary.

To operate these activities various type of information are required to take proper decision. Such information normally comes from different sources. Normally a branch, the client & the head office are simultaneously involved to mature an investment proposal. Therefore, to take a decision all the related data are needed to accumulate in a single frame to take decision.

In addition to project investment decision MIS is very much essential, for preparing or forecasting the investment plans. An investment plan is formulated by keeping in view the national economic priorities and aiming at diversification of the investment portfolios by size, sector, geographical area, economic purpose & security to bring in all sectors of the economy & all types of economic activities in phases and different economic strata of the society within the fold of Bank's investment operations. So huge information is involved in preparing investment portfolios.

To perform this business operation efficiently a common computer based database system is very much important. It is also equally essential to meet the present competitive market of banking sector. If a computer based information system is developed, it will be very much helpful to process business proposal within a short time. Some time it will be effective to forecast the total business position of the bank. From a common database system, relevant analytical output and different type of informative figures and graphical interpretations may be found out as per requirement of the top management.

1.4 Objectives of the Study

As outlined earlier, a computerized MIS system for investment activity will be an essential tool for business operation of a bank. Such a system will be useful for all banks. As such MIS shall be generic so that it can be computerized to implement it in all banks having investment operations. The management can use it for decision and, policy planning, and improve the monitoring & productivity of the organization. Therefore, the objective of this study is to prepare a computerized database system to implement MIS for Industrial Investment of a commercial bank.

Specific objectives of this project was as follows

- Collecting and analyzing information related to the Industrial Investment Proposal.
- Study the system and related literature.
- Identification of outputs required by the management
- Implementing the MIS through Microsoft Access package
- Providing interactive query facilities, documents for collecting, sorting, retrieving and transmitting information as per requirement of the system.

1.5 Methodology

The work was carried out following the methodologies as outlined below:

- Collecting information related to the Industrial Investment Proposal from different banks
- Study the system structure using different system study techniques
- Classify the field of information and design entity relationship diagram
- Execute the database through “Microsoft Access” – Package
- Develop different database table, data entry form, query and report using MS Access package.
- Test runs the Program.

CHAPTER-2
INVESTMENT PROCESS IN BANK

2.0 INVESTMENT/LOAN & ADVANCE

Investment means to loan or credit money for a new or existing plant or equipment of a project for a particular period by charging profit or interest on that amount as per rules and regulations of the bank. The Making of loans & advances/ investment or credit finance has always been prominent and most profitable function of a bank. Investment/loan by commercial banks are made in different forms. Such as loans, overdrafts, cash credit, bill purchased and discounted etc. Bank usually grants short-term investment/loan & advances that are utilized to meet the working capital requirements of the borrower. The whole amount of investment/loan is debited to the customers name on a separate loan account to be opened in the ledger and is paid to the borrower either in cash or by way of credit to his account. Interest/profit/rent is charged on the entire disbursed amount (debit balance) usually with quarterly, monthly or half yearly arrangement. Loans are granted for short, medium, long periods. Short-term loans are usually granted to meet the working capital needs of the borrowers, which are repayable on demand. Medium term loans are repayable over a period of 2 to 5 years. Long-term loans generally called term loans are given for a period of over 5 years. These loans help the borrowers expand their industrial or agricultural activities [11].

When a bank invests money in medium or long-term basis it becomes project. Accordingly to find out the viability of the project, the bank has to take necessary action upon it.

2.1 STUDY OF PROJECT PROPOSAL FOR INVESTMENT

When a bank/financial institution comes across the proposal of a project with a request to investment/finance it, it will have preliminary investigation about the project and its sponsor(s). If the project is sponsored by an existing company, it is comparatively easy to ascertain the background and financial strength of the unit. In the case of entirely new venture a more careful investigation into the standing and financial resources and managerial capacity of the sponsors has to be made. The banker will then proceed to make an exhaustive appraisal of the project proposal to ascertain whether the project is technically, economically, financially and managerially viable. This is done because of the

scarce resources at the disposal of the banker, which has got to be effectively utilized in the best interest of the society as well as the sponsor(s)

Assessing the financial viability of a project is an important task in a project appraisal exercise. The first and foremost consideration in this area is to determine the total financial requirements of a project in terms of

- Break up of the total cost of the project.
- Source of finance as far example, bridge financing, syndicate financing etc.
- Bank and client equity ratio of the project

To take attempt for finding out the answer to the above issues, different information regarding the respective project will be needed at different levels. In that case MIS i.e. a computer based Database will be very much useful to find out the above issues

2.1.1 Cost Estimation of the Project

Cost estimation of the project comprises the capital cost and the working capital estimates

- **Capital Cost Estimation**

An exhaustive and critical review of the capital cost estimates of the project is necessary. The object of such a review is to ascertain whether the various estimates submitted by the sponsor(s) is realistic and sufficient and sufficiently flexible. Capital cost estimation analyzes the following

- Land and site development
- Building and civil works
- Plant and machinery
- Technical know how and Engineering fees
- Miscellaneous fixed assets
- Intangible expenses
- Pre-operating expenses
- Preliminary expenses
- Contingencies

- **Working Capital Cost Estimation**

The term working capital is used as a gross as well as a net concept. Gross working capital refers to total of all current assets in a business. Net working capital refers to

the excess of current assets over current liabilities and identifies the relative liquid position of total enterprises capital, which constitutes a margin or buffer for meeting obligation with the ordinary operation cycle of the business.

Factors having a bearing on working capital requirements:

- Nature of industry
- Length of period of the operation cycle
- Sources and availability of raw –materials
- Credit practices
- Organizational policies

The following items are included in the working capital estimates

- Stock of raw materials
 - Imported
 - Indigenous
- Stock in process
- Stock of finished goods
- Consumable stores and spares
- Receivables
- Operating expenses
- Advances payment for purchases

2.2 STUDY OF THE PROJECT

Whatever is the size of the project (small/medium/large), a project is defined as scientifically evolved work plan/investment proposal conceived to achieve a set of specific objectives within a specific period of time using resources available for that period only which cover the project cycle [11].

2.2.1 Project Cycle

A project cycle includes six phases during the life of a project This is shown schematically in Figure 2.1

Phase I: Identification of Project

Imaginative scanning of the environment to assess threats and opportunities

Phase II: Formulation of Project

Translation of an investment opportunity into a concrete project with its important aspects delineated broadly and development of information profile relating to the various aspects of a project.

Phase III: Appraisal of Project

Pre-investment analysis and evaluation from market, technical, financial and economic points of view and finally selecting the project

Phase IV: Implementation of the Project

Expeditious completion within the given time frame and resources budget

Phase V: Operation of the Project

Smooth operation of the project during its operational life to enable production of goods/services with a view to marketing those in line with the forecasts/projections made at the pre-investment stage.

Phase VI: Evaluation of the Project

Ex -post evaluation of the project by comparing the actual costs/benefits with the projected costs/benefits at the end of project life and provide feedback.

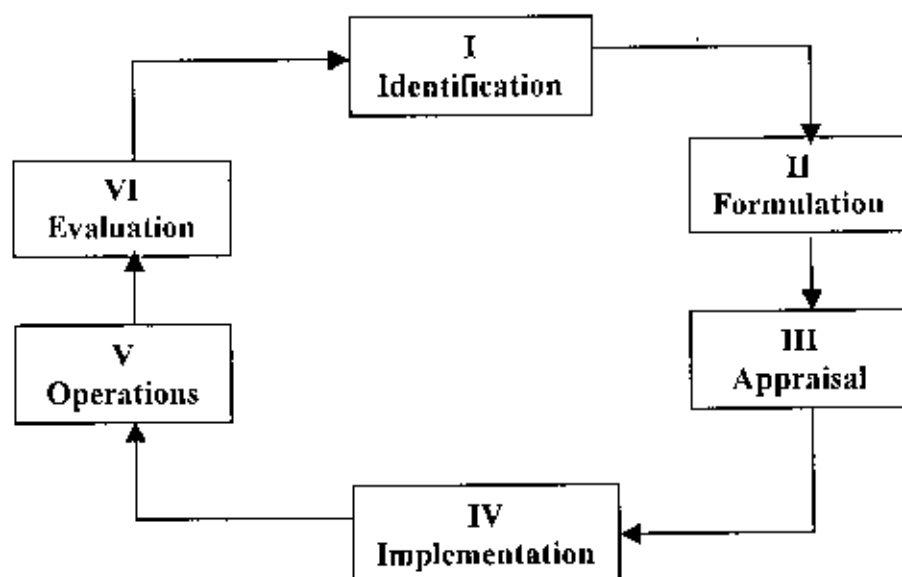


Figure 2.1: Project Cycle

2.3 INVESTMENT PROCESSING FLOW AND DECISION MAKING DIAGRAM OF A PROJECT PROPOSAL IN A COMMERCIAL BANK

Project proposal requesting financing be initiated generally through a branch of the bank. The proposal is then forwarded to the credit division of the bank's head office for processing. Figure 2.2 shows the whole process schematically. The client first places his/her proposal informally to the branch for preliminary consent (specially for the large project). The proposal then forwarded to the head office. If the management of bank seems that the proposal may be detail studied then it will back to the branch to place a formal proposal providing all the necessary information, otherwise a decline letter will be issued regarding to the proposal. After getting the formal proposal head office executive and officials will examine the proposal in different aspects like, feasibility study, appraisal, investment risk analysis, landing risk analysis etc. After then the top executive committee / management of the bank give there consent on the basis of the analysis of the project proposal. If the proposal is approved by the committee a sanctioned letter will be issued to the branch in favor of that client, otherwise a decline letter will be issued. Disbursement of money will be issued through respective branch after documentation as per terms & conditions mentioned with the proposal earlier.

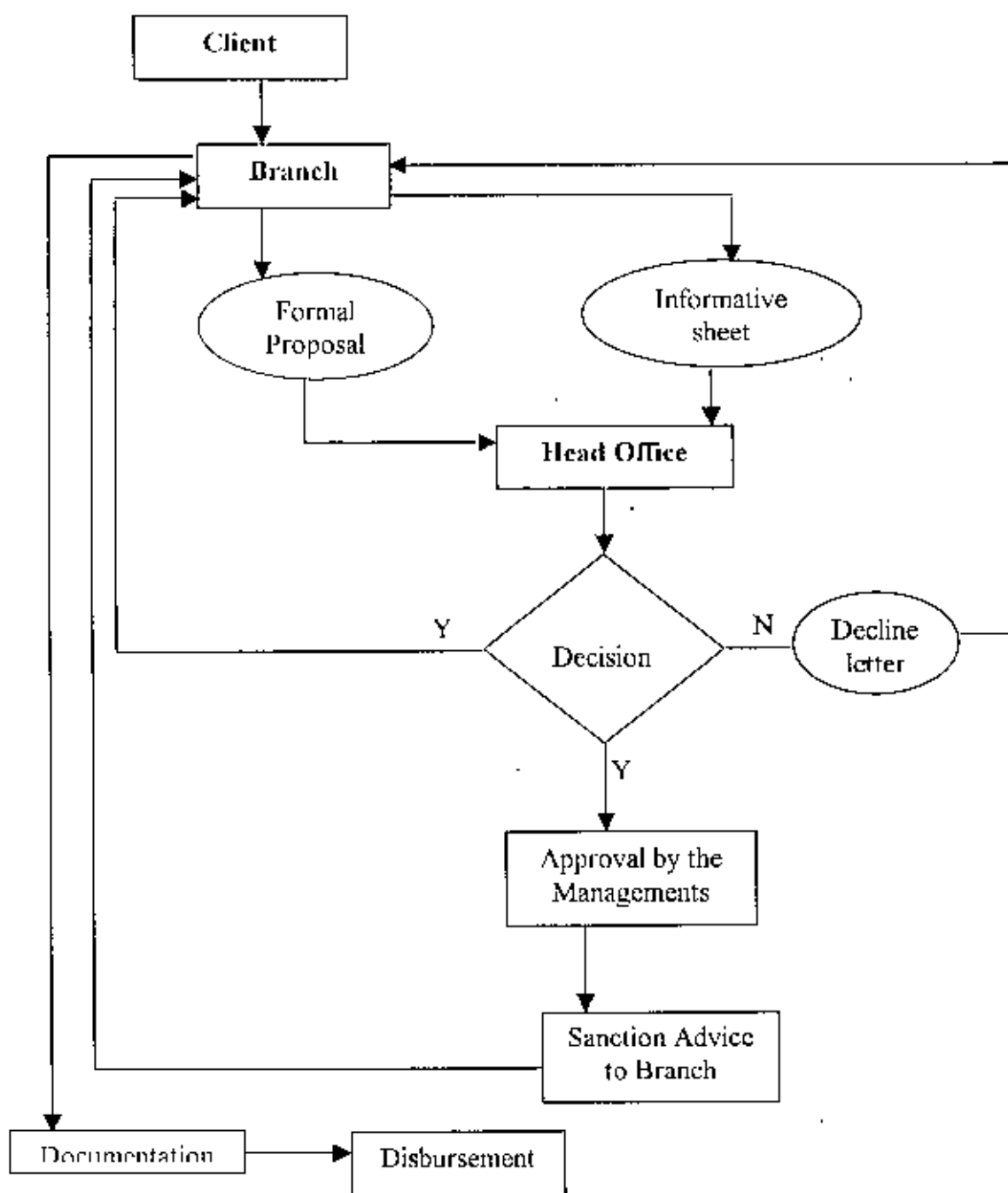


Figure 2.2: Flow Diagram of Investment Processing

CHAPTER-3

LITERATURE STUDY ON SYSTEM ANALYSIS, DESIGN AND DEVELOPMENT OF MIS

3.0 MANAGEMENT INFORMATION SYSTEM (MIS)

Today the need for updated information has become inevitable to arrive at an effective decision in all walks of life. Whether it is industry, commerce, defense, banking, education, economics or politics, information is needed everywhere. The management information system (MIS) is an integrated man-machine system that provides information to support the planning and control functions of managers in an organization. MIS produce the information needed for successful management of a structured problem, process, department, or business. Before the evaluation of computers, MIS techniques existed to supply users with information that would permit them to arrive at an effective decision. The computer has added new dimensions such as speed, accuracy and processing of massive data that permit the consideration of more alternatives in a decision.

3.1 SYSTEM ANALYSIS TECHNIQUE

Planning the information systems has become increasingly important because information is a vital resource and company assets. More and more funds are committed to information systems, and system development. This system includes computers with incorporation of databases and networking [4].

In this work we are mainly concern about the database of a particular business division of the commercial bank.

Management Information Systems are designed for providing information to the key functionaries in an organization. These systems make use of the already processed data, which is output from different file processing system, and generate information reports after processing data.

3.1.1 Database

A database models the data resource of an organization using the relationship between data items. The model is independent of any application program. Database contains data, not information. By itself, the database is meaningless. With some assertions about the meaning of the data and some rules, for processing the data, or is able to produce

information from the database Management can act upon information. Thus, through proper design and uses of database, it can be an essential tool for producing information for making management decision.

When data are processed, they become information only when they are presented to the decision maker in a meaningful manner. Any data to be useful in decision-making must meet three main criteria:

- a. It must be accessible to the people who need it.
- b. It must be well organized, cross-referred, and efficiently managed; and
- c. It must be easy to create, update and maintain.

A database program, however, is much more powerful than a simple list that is kept on paper or in Microsoft Word document. A database program lets:

a) Store Information

A Database stores lists of information that are related to a particular subject or purpose or entity. A database store personal information, such as name, age, education or business information such as a list of hundred or thousand of clients etc. a database also makes it easy to add, update, organize, and delete information.

b) Find Information

Anybody (as per permission granted earlier to use data base) can easily and instantly locate information stored in a database, for example, it could be possible to find out the sponsor's name of all the project of the industrial investment proposal of the credit division of a commercial bank which last name is Chowdhury or sponsors who live in Dhaka or the project name whose investment is more than Tk 100 million etc. Individual or management can satisfy by posing queries on database. Query is question to be answered by accessing the data in a database.

c) Analyze and Print Information

Calculation on information in a database should be possible. For example, what percent of the total investment is made to the individual project could be possible to find out. It should also possible to present information in a professional looking printed report. A

report is an effective way to present data in printed format. Data in report comes underlying tables, queries. Before creating a new report, it is important to design it. To make an effective and presentable report the following should be followed:

- To review the tables, forms, and queries currently used in the database.
- To identify the data components of the report.
- To be sure that all-necessary data is entered in the appropriate tables
- To consider creating a query as a preliminary step if the report contains fields from more than one table or, if there are derived fields.

To review the existing printed reports, and get feedback on outstanding issues or areas that needs improvement from the users who use the report

d) Management Information

Database make easy to work out and manage huge amounts of information. For example, with a few keystrokes, anybody can change the area code for hundreds of clients/sponsors in the (1200) area code to a new (1212) area code

e) Share Information

Most database programs (including Microsoft Access) allow more than one user to view and work with the same information at once. Such database are called multi-user database.

In MIS database is the main resource. A computerized database routine for collecting, retrieving, or manipulating data to meet recurring needs such as query, report etc

3.2 DATABASE TERMINOLOGY

Five of the most commonly used database terms are entity, attribute, data, item, record and relation [3]

Entity

An entity is a person, place, thing, event or condition about which data and information are collected. For example a sponsor entity include name, age, address, extent of share etc. Entity is also known as table

Attribute

Each category of data or information describing the entity is called an attribute. An attribute is a fact about a Table/Entity. Example of Attribute of a database table is shown in Figure 3.1

Entity	Attribute (Data and Information)
<i>Branch</i>	<i>Branch ID</i>
	<i>Branch name</i>
	<i>Zonal office</i>
	<i>Branch phone no</i>
	<i>Zone phone no</i>

Figure 3.1: Example of Attribute of a Database Table

Data Item

Data item is a specific detail of an individual entity that is stored in a database. Example of data item is shown in figure3.2

General Record Structure for Branch Entity		Specific Record	Data items
Attributes/Fields			
{	<i>Branch ID</i>	<i>1</i>	}
	<i>Branch name</i>	<i>Dhanmondi</i>	
	<i>Zonal office</i>	<i>Dhaka South</i>	
	<i>Branch phone no</i>	<i>9125316, 9129333</i>	
	<i>Zone phone no</i>	<i>8319300, 8312941</i>	

Figure 3.2 : Example of Data Item of a Database Table

Record

A record is a grouping of data items; it consists of the set of data and information (data, text, sound or image) that describes an entity's specific occurrence (or instance). Each record in a database describes one specific occurrence of an entity. Record hold the information about an instance one record per instance. If the university used a paper –based

system, it would probably create a paper record: a form or an index card for each student. Records stored in a computer database are usually maintained on magnetic storage.

Relation

Relationship is an association established between common fields (columns) in two tables. A relationship can be one-to-one, one-to-many, or many-to-many.

- A **one-to-many relationship** is created if only one of the related fields is a primary key or has a unique index.
- A **one-to-one relationship** is created if both of the related fields are primary keys or have unique indexes.
- A **many-to-many relationship** is really two one-to-many relationships with a third table whose primary key consists of two fields — the foreign keys from the two other tables.

Primary key

Primary key is one or more fields (columns) whose value or values uniquely identify each record in a table. A primary key cannot allow null values and must always have a unique index. A primary key is used to relate a table to foreign keys in other tables.

Foreign key

Foreign key is one or more table fields (columns) that refer to the primary key field or fields in another table. A foreign key indicates how the tables are related - the data in the foreign key and primary key fields must match, though the field names do not have to be the same. A foreign key can be null; if a foreign key consists of more than one field and any of those fields is null, all the fields must be null.

Index

Index is a feature that speeds up searching and sorting in a table based on key values and can enforce uniqueness on the rows in a table. The primary key of a table is automatically indexed. Some fields can't be indexed because of their data type.

Join

An association between a field in one table or query and a field of the same data type in another table or query. A join tells how data is related.

Data type

Data type is the attribute of a variable or field that determines what kind of data it can hold. For example, the Text and Memo field data types allow the field to store either text or numbers, but the Number data type will allow the field to store numbers only. Number data type fields store numerical data that will be used in mathematical calculations. Currency data type is used to display or calculate currency values. There are many different data types used to store only numbers, such as int, numeric, and decimal; they are used according to the number's length and precision

Field

Field is a set of codes that instruct the computer software to insert text, graphics, page numbers, and other material into a document automatically. For example, the DATE field inserts the current date, and the TIME field inserts the current time.

3.3 RELATIONAL DATABASE

Relational Database is a database in which the data are structured in a table format consisting of rows and columns. Example of relational database of a database system is shown in figure 3.3

Group Relation

Group ID	Group name	Main sponsor	Number of concern
1	Youth	Abul Quasem Haider	11
2	New Tex	Akram Khan	6
3	Dignity	A.B.M. Moinuddin Hossain	3
4	Norman	Md. Nurul Islam	9
5	Ideal	Md. Jahid Ali	2
6	Rahima	M. A. Rob Chowdhury	3
7	Younus	Md. Younus	4
8	H. Steel	Harunur Rashid	3
9	Starling	Sirazul Huq	2
10	Swisstex	Sibbir Mahmud	5
11	Aman		2

Records {

} Attribute / Fields

Figure 3.3 Example of Relational Database

The table itself, called a relation or file, describes an entity. The rows of the relation are its records. The relation's columns are its attributes or fields.

Relations have four general characteristics:

- I. Each column has a single value about the same attribute
- II. The order of columns in the relation does not matter
- III. The order of rows in the relation does not matter
- IV. Each row is unique –one row cannot duplicate another

3.4 ENTITY RELATIONSHIP MODEL

The entity relationship (E-R) model data is based on a perception of a real world that consists of a collection of basic objects, called entities, and if relationship among these objects. An entity is a thing or object in the real world that is distinguishable from other objects. A relationship is an association among several entities. An E-R diagram can express the overall logical structure of a database graphically. Entity Relationship Diagram is the analysis stage of the systems development lifecycle towards the design stage. This is because this diagram or model shows about how data is represented and how different sets of data relate to each other. In order to produce good –quality information, two things are needed above all others. These are accurate data and correct processing [1,2]

In the analysis context, it is necessary to engage in fact-finding activities that reveal the data, which underlies all the relevant business process, so that it can be captured and stored correctly and then processed to produce the required information. This process will reveal details of certain entities, which exist within the business. One of the most useful methods that can be used is the review of records and documentation (for example proposal forms, project form, sponsor etc. of the MIS of a industrial investment division). Figure 3.4 shows the relationship with the proposal, project and sponsor of an investment proposal of a client. Here a proposal may have more than one projects, so one to many relationship will be maintained between proposal and project, similarly a project may have more than one sponsor and a sponsor may belongs to more than one project, so project & sponsor entities will maintain many to many relationship.

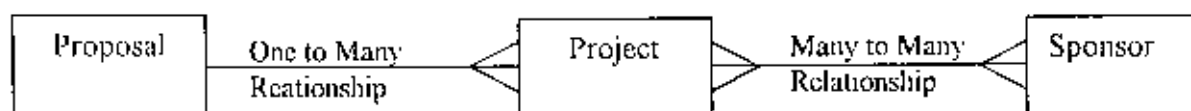


Figure 3.4 : Essential Symbols in an entity relationship diagram

3.5 DATA FLOW DIAGRAM

Dataflow diagrams (DFD) define the different process in a system and the information, which forms the input and output to the process. They provide a process focus to a system. Dataflow diagrams of different types are one of the mainstays of many systems analysis and design methodologies. As a tool to document processes, data or information flows and the relationships between them for an existing system (computerized or paper based), they are extremely valuable. Examples of a completed DFD for the file processing of an investment proposal of a commercial bank are shown in Figure 3.6(I), 3.6(II), 3.6(III), and 3.6(IV) as per sanction limit authority respectively

Different methodologies adopt different symbols for designing data flow diagram. Explanations of the symbols are as follows [5]:

Sources and Sinks

An information source is one, which provides data for a process and is outside the system boundary. A sink lies outside the system boundary and is a receiver of information

Process

Processes convert data into usable information or data in a different form for use in another process. The data, which enters a process, can come either from a datastore or from an external source

Datastores

A datastore can either provide data as input to a process or receive data, which has been output from a process. The amount of time that data would spend in a datastore can vary from a very short time or much longer periods

Dataflows

A dataflow describes the exchange of information and data between datastores and process and between processes and sources or sinks.

System boundary

System boundary indicates the boundary between what lies inside the system under consideration and what lies outside Fig 3.5 shows the different symbols used in DFD.

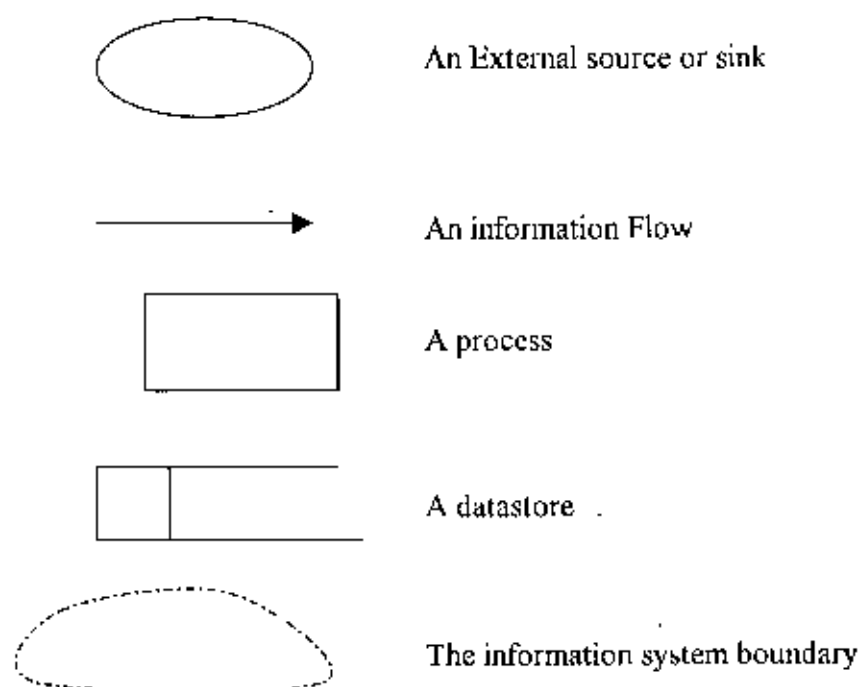


Figure 3.5 : Symbols used in dataflow diagram

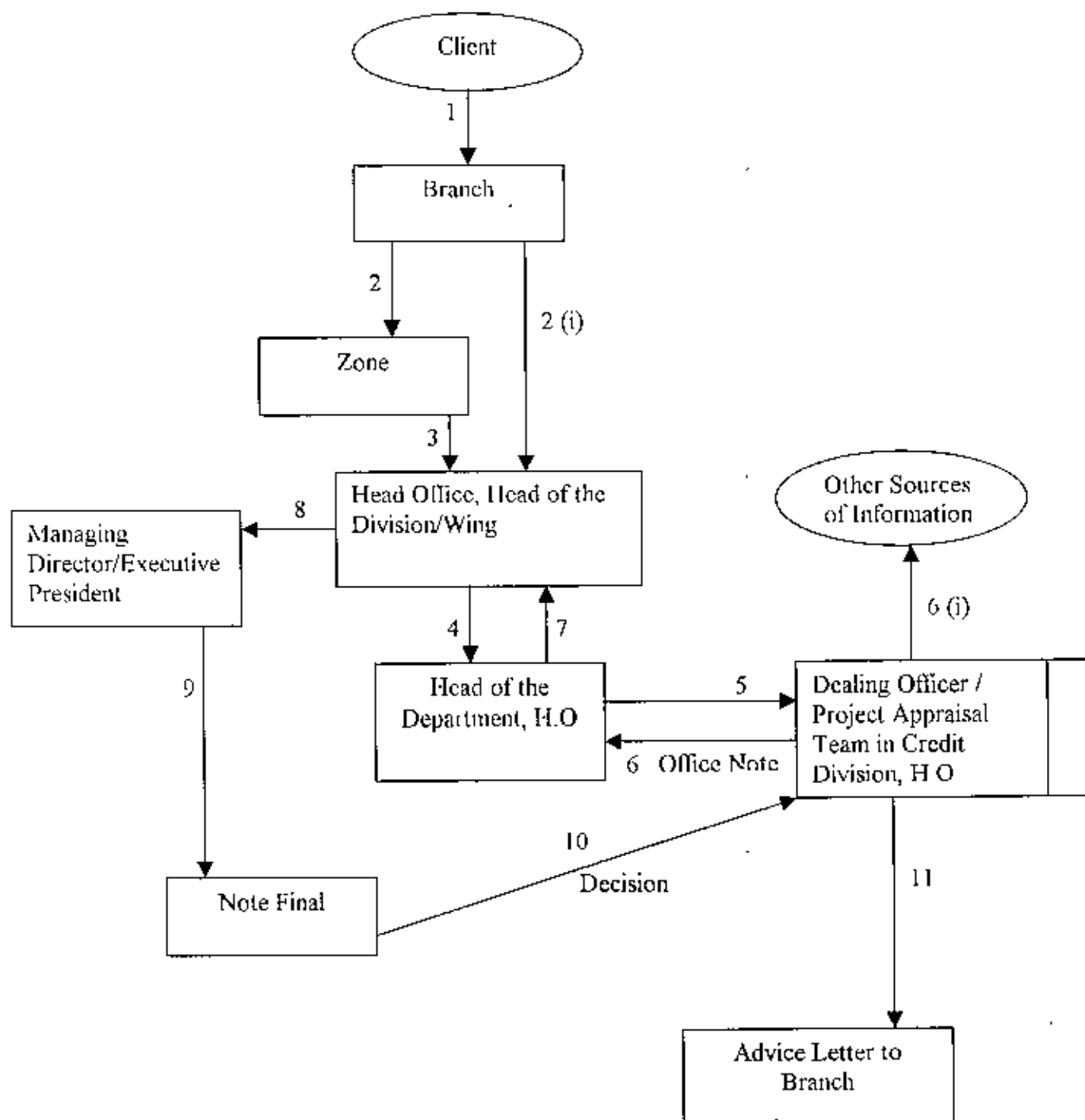


Figure 3.6(I) : Example of completed DFD for the file processing of an investment proposal of a commercial bank FOR THE AMOUNT OF TERM LOAN LIMIT <7,500,000/-

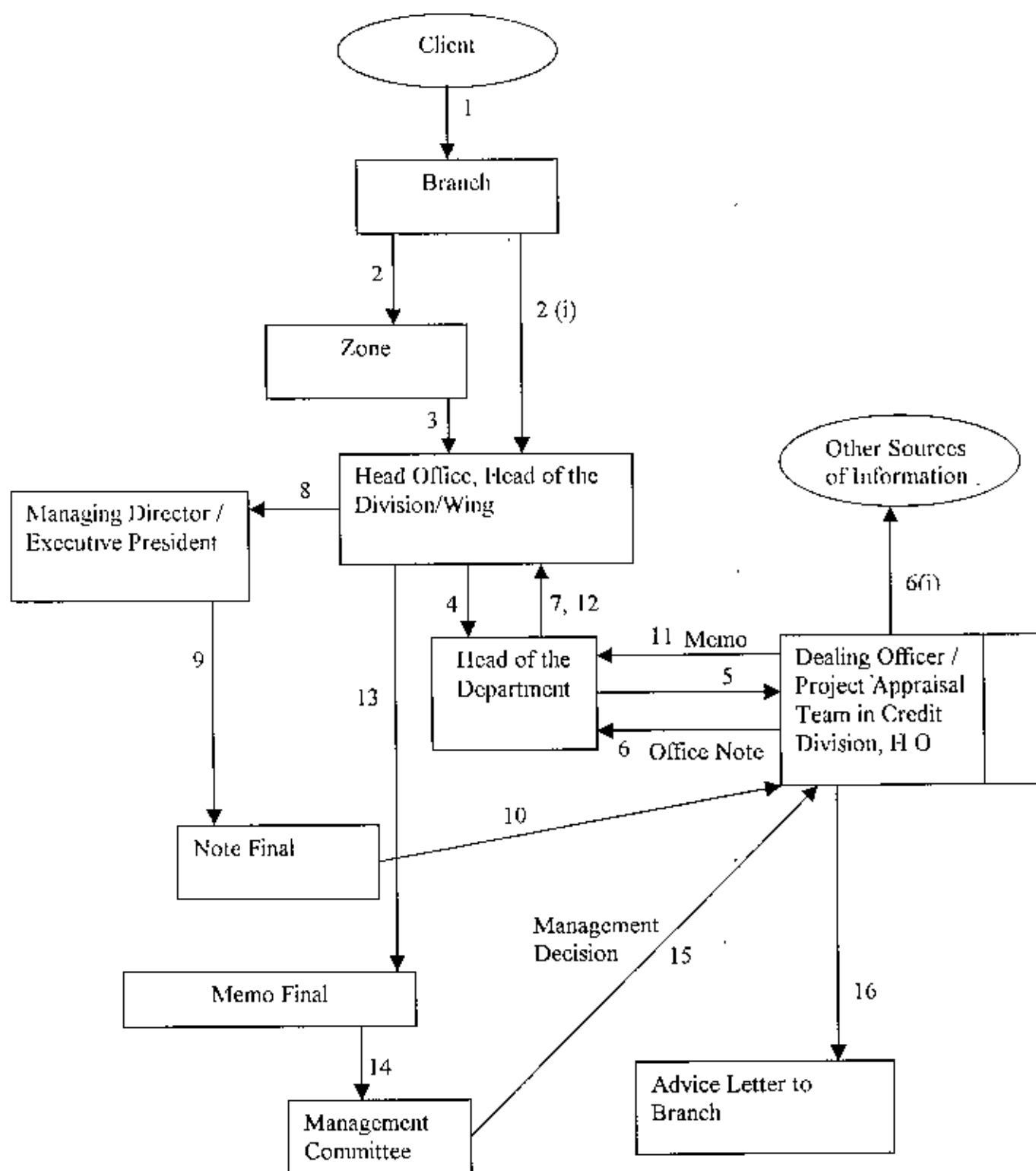


Figure 3.6(II) : Example of completed DFD for the file processing of an investment proposal of a commercial bank FOR THE AMOUNT OF TERM LOAN LIMIT >7,500,000/- <15,000,000/-

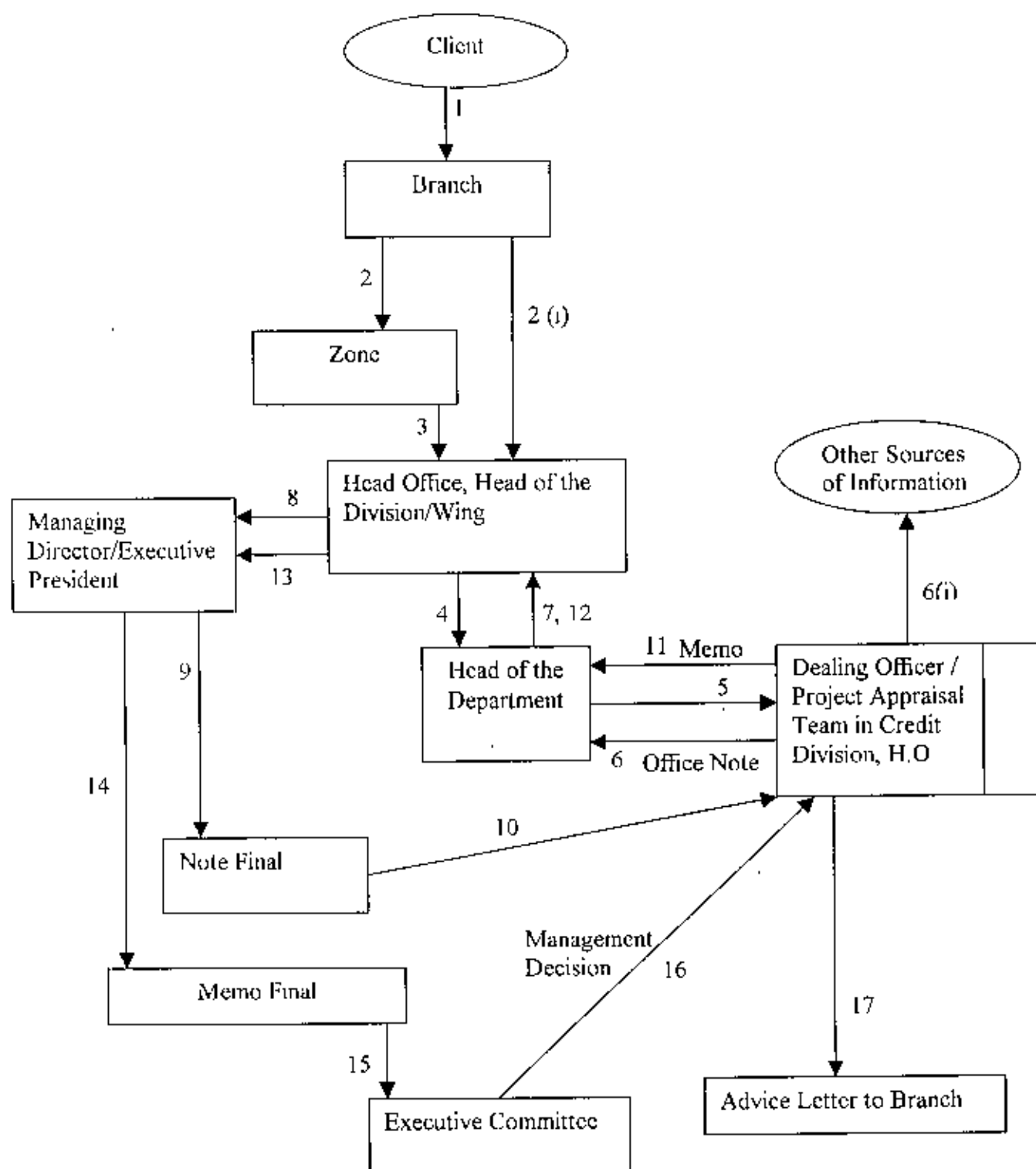


Figure 3.6(III) : Example of completed DFD for the file processing of an investment proposal of a commercial bank FOR THE AMOUNT OF TERM LOAN LIMIT >15,000,000/- <750,000,000/-

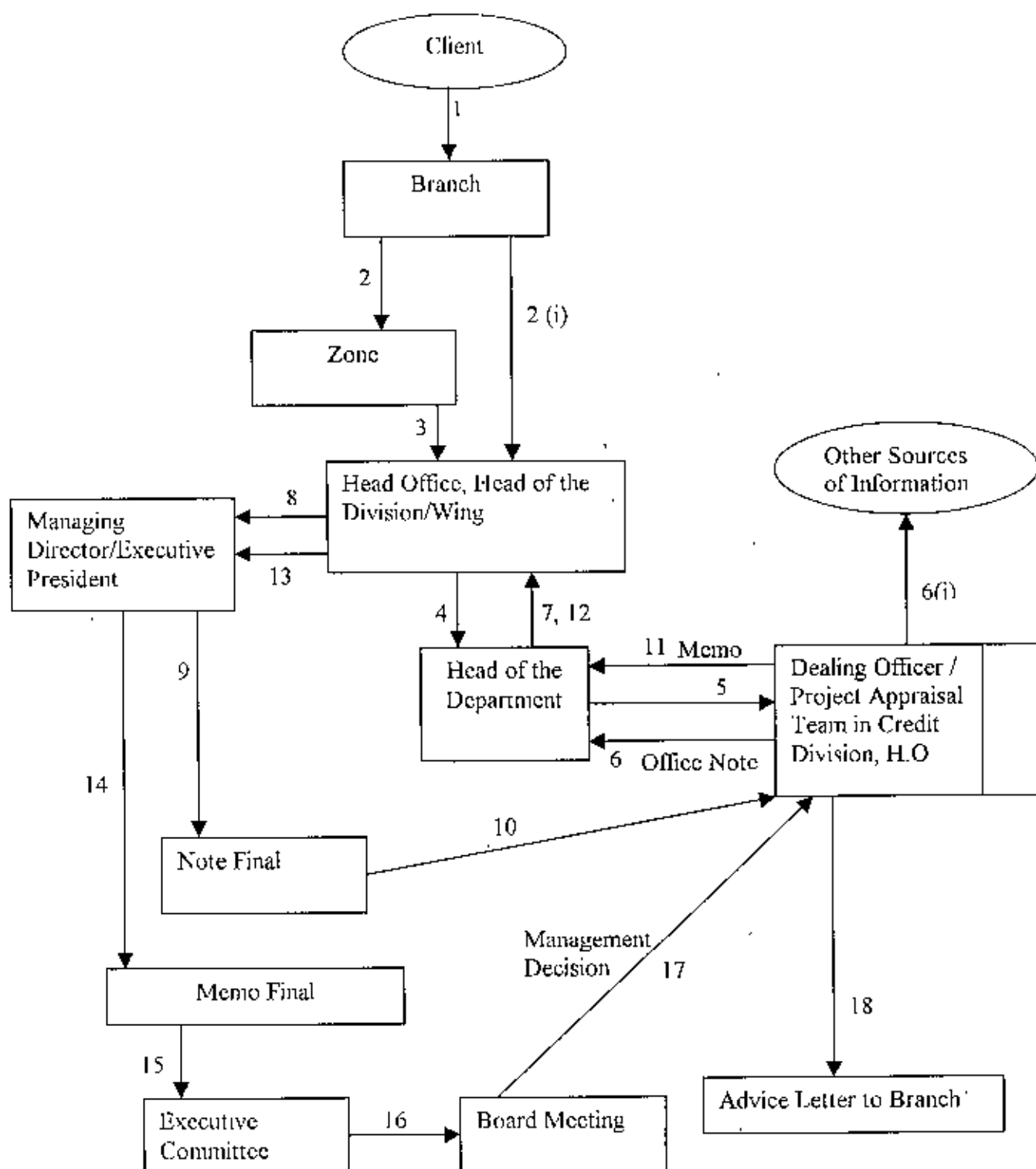


Figure 3.6(IV) : Example of completed DFD for the file processing of an investment proposal of a commercial bank FOR THE AMOUNT OF TERM LOAN LIMIT >750,000,000/-

3.6 DATABASE MANAGEMENT SYSTEM

Database management system is a program that makes it possible for users to manage the data in database in order to increase productivity. Most commercial database for microcomputers use relational database. In relational model, data is represented using –two –dimensional tables, called relations or flat files, which are made up of columns and rows. Relational database use three fundamental operations: select, project and join. The select operation is a horizontal cut so that only selected rows (records) are included in the query results. The project operation creates a subset of columns (or a new table) designed to meet the information needed of the user. The join operation joins, or links, two or more tables, if the information requested by the user is not found in one table.

One of the popular relational databases is Microsoft Access. In this work the MIS of the Industrial investment of a commercial bank has been developed in Microsoft Access. Microsoft Access is a powerful database program that can be used to store all kinds of information from a simple list of recipes to an inventory catalog with tens of the thousands of products. Once information is stored in a Microsoft Access database, it's easy to find, analyze, and print.

Microsoft Access is a relational database management system (RDBMS) designed for the graphical environment of Windows. Relational database management system enables users to manipulate data in more sophisticated ways. RDBMS avoids redundancy in data and defines the relationships between sets of data. The relationship is a common element between tables/entity such as project name, which is a common element in investment table. The data stored in each table can be retrieved and updated based on data in another table. With Access the following tasks may be done easily:

- Organize data into manageable related units
- Enter, locate and modify data.
- Extract data based on specific criteria
- Create custom forms and reports

- Automate common database tasks
- Graph data relationships.

Database usually consists of several parts. A Microsoft Access database may contain up to six different database object types, these are-

Tables

Tables store data in a row-and-column format similar to spreadsheets. Every table in a database focuses on one subject, for example project, investment, sponsor etc. Each row or record in the table is a unique instance of the subject of the table.

Queries

Queries extract data from a table on a user-defined criteria. They enable to view fields from more than one table.

Forms

Forms display and print data from a table(s) or a query based on a user-defined custom format. Forms enable to view, edit and print data.

Reports

Reports display and print data from a table(s) or query based on a user-defined custom format. Data cannot be edited in a report.

Macros

Macros automate common database actions based on user-specified commands and events.

Modules

Modules automate complex operations and give a programmer more control than macros. Modules are procedures written in Visual Basic for Application Programming Language.

There are different strategies for controlling the level of access to the Microsoft Access database. These strategies are-

- I. Encryption/Decryption
- II. Show or Hide Objects in The Database Window
- III. Using Startup Options
- IV. With a Password
- V. With User-Level Security
- VI. Preventing users from replicating a database, setting passwords, or setting startup options
- VII. Securing Microsoft Visual Basic for Applications (VBA) Code
- VIII. Securing Data Access Pages

Details of the security option of Microsoft Access database file are shown in Annexure-B.

CHAPTER-4
INVESTMENT SYSTEM ANALYSIS

4.0 FUNCTIONAL ANALYSIS OF THE PROJECT FINANCING

The allocation of financial resources to a project constitutes an obvious and basic prerequisite not only for any investment decision but also for project formulation and pre-investment analysis. A feasibility study would serve little purpose if it was not backed by a reasonable assurance that resources were available for a project if the conclusions of the study proved positive and satisfactory. A preliminary assessment of project financing possibilities should already have been made in most cases before a feasibility study is undertaken. This is especially true if a project —opportunity or pre-investment study has previously been performed, as such, studies would indicate the order of capital outlay required. A feasibility study should only be made if financing prospects to the extent indicated by such studies can be defined fairly clearly.

Resource constraints may define the parameters of a project well before an investment decision is made, and at various stage of project formulation. A large steel plant may not be practicable in a small country with extensive ores but very limited financial resources. Such resource constraints may limit the consideration of certain projects or any restrict project capacity to the minimum economic levels. Financial constraints could exist at all levels of project sponsorship and could occur whether a particular project is under consideration by an individual entrepreneur, a major industrial group (domestic or foreign), or a government or semi governmental agency.

Apart from some instances where resource constraints constitute a major limited factor in the consideration of project possibilities and project size, it is only when the basic techno-economic parameters of a project are defined that the detailed requirements of financing can be adequately assessed. Thus, in a feasibility study, the capital outlay of a project can be appropriately determined only after plant capacity and location have been decided, together with an estimation of the costs of a developed site, buildings and civil works, and technology and equipment.

It is equally necessary to define the financial requirements of project at the operational stage in terms of working capital. This can only be determined once estimates are made of production costs, on the one hand, and sales and income on the other. The estimates should be over a period of time, and be reflected in a cash-flow analysis. Unless both these estimates available and unless resource availability adequately covers the requirements of ends, both in terms of initial capital investment and working capital needs over a period of time, it would not be prudent to proceed to the stage of project implementation. There are innumerable instances of projects that ran into serious financing problems because of inadequate estimates of fund requirements at the initial investment or operational stage- because investment and production costs were underestimated, or sales and income were overestimated [7,8,9]

4.1 SOURCE OF INFORMATION

Major information is collected from the client through branch. When a client is intend to submit a project proposal for bank financing then is asked to place different information regarding the respective proposal. The client then fills up the prescribed form of investment, which is submitted from branch. Such forms may be loan application form, project appraisal form, project summary form etc. (a copy of the application form is shown in annexure D). By collecting this information initial assessment of the proposal is done in branch leve. The proposal is then forwarded to the head office with required information for approval of the proposal. If required more information is collected from branch or from client for analysis of the project in head office level. For feasibility study, sensitivity analysis and investment risk analysis all this information is required (a form of investment risk analysis is shown in annexure E). Sometime information is collected from other sources like existing data recourse in the bank, Bangladesh bank, bureau of statistic, different associations like Bangladesh textile mills association, etc. Office note, different memo and sanction advice etc. is placed on the basis of these information and analysis. Figure 4.1 is shown the media of information flow for a project proposal.

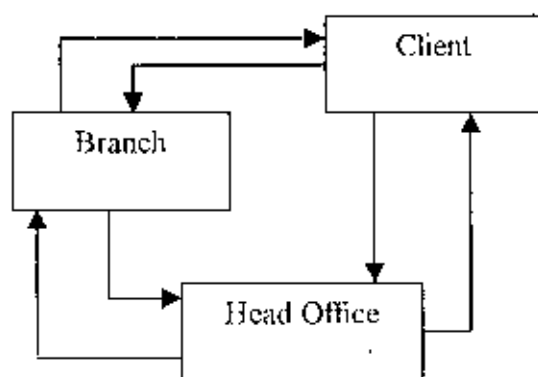


Figure 4.1 : Media of Information Flow

4.2 FLOW DIAGRAM OF THE INDUSTRIAL INVESTMENT MODEL FOR MIS DEVELOPMENT

Dataflow diagram is the basis to develop a system process. Dataflow diagram is the prerequisite to design a management information system. Stage wise data processing systems are given below.

4.2.1 Preliminary/ Identification Stage of a Project Proposal

When a proposal comes from branch to head office, all the information regarding the proposal needs to be found out to analyze it. The proposal may have one or more projects and the project will be sponsored by one or more persons. Against proposal/client the project has to be found out in the project table then the sponsors. Similarly asset, bank limit & liability, group and concern business are needed to be found out against the respective project and proposal. A data flow diagram of the preliminary/identification stage of a project proposal is shown in the figure 4.2.

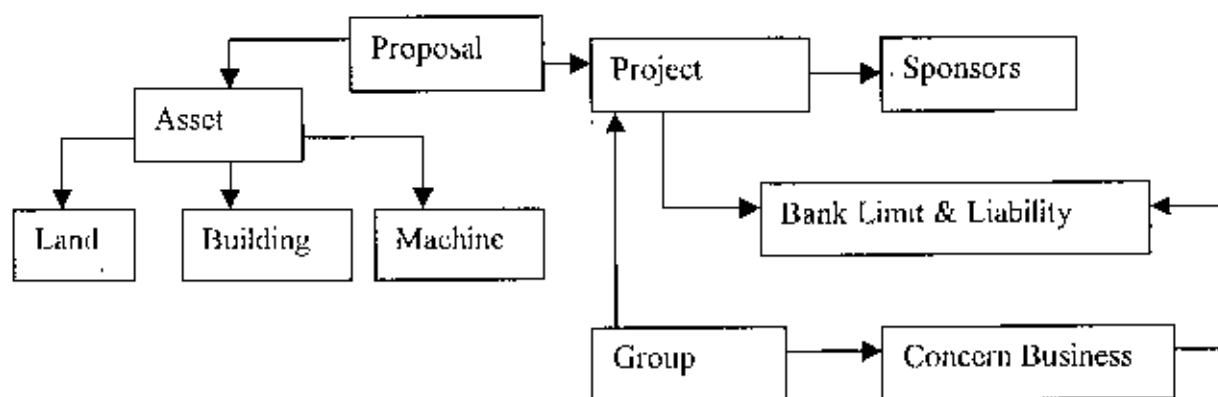


Figure 4.2 : Data Flow Diagram of Preliminary/ Identification Stage of a Project Proposal

4.2.2 Processing Stage of the Project Proposal

After find out the information and different analysis of the proposal, it will be prossed as a file to take management decision in a systematic way. A dealing officer will process or initiate the file of a particular proposal/client. In some cases a dealing officer can take access form others if required. A dealing officer will first place an office note to its departmental head After completing all formalities of the office note the dealing officer will then place the memo to take top management's consent regarding the issues that he mentioned earlier in the office note. As per memo decision an advice letter will be issued to the branch Data flow diagram of the processing stage of investment proposal file is shown in the figure 4.3.

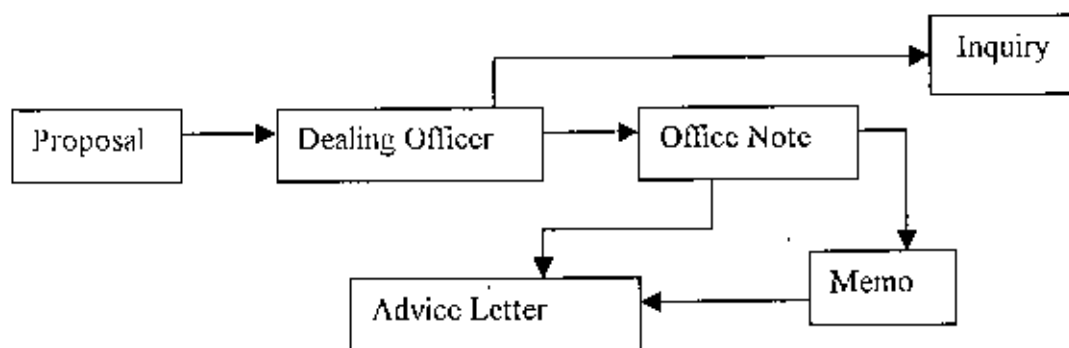


Figure 4.3 : Data Flow Diagram of The Processing Stage of Investment Proposal File

4.2.3 Investment/Disbursement & Monitoring Stage of a Project

If the Management of the bank approved the proposal (through memo) investment will go under operation against the client after necessary documentations. Investment will be given to each project separately under some terms and conditions, which will be stored in investment table. Disbursement will be done in branch level as per sanction advice that is sent to the branch from head office. In monitoring purpose all the disbursement, outstanding and recovery position for a certain period of a particular project/ client are stored in the respective table. This information is collected from the branch as per requirement of the head office. Data flow diagram of investment/disbursement & monitoring stage of a project is shown in the Figure 4.4.

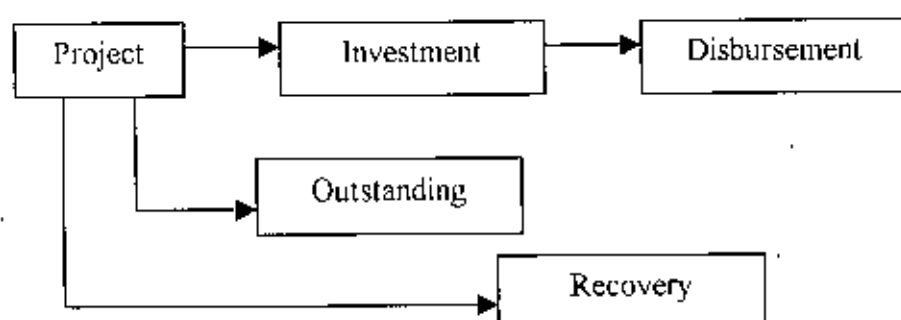


Figure 4.4 : Data Flow Diagram of Investment/Disbursement & Monitoring Stage of a Project

4.3 E-R DIAGRAM TO DEVELOP MIS

The relation data model is developed from the conceptual and logical data model through normalization process where all group is moved. Figure 4.5 shows the E-R diagram of the Industrial Investment of a Commercial Bank. To develop ER diagram all the information are classified into different tables. This entity relationship diagram (ERDs) will provide a data -focused view of the main data objects or entities within a system such as project, proposal, sponsors, investment etc and the relationship between them.

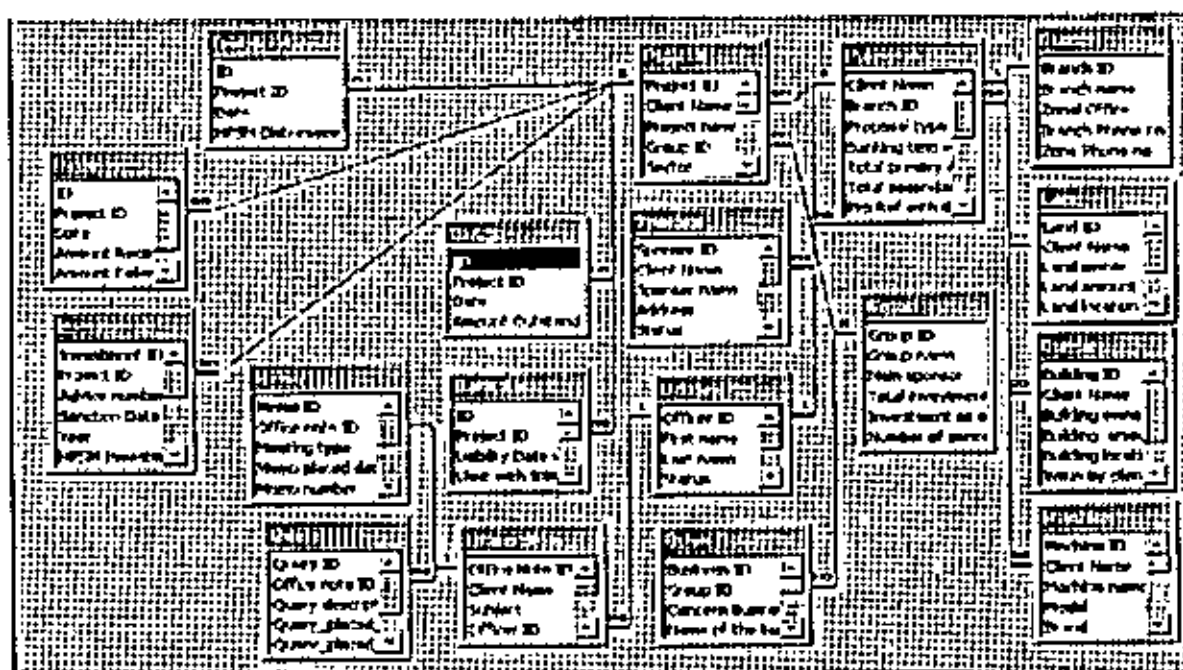


Figure 4.5 : E-R Diagram of the Industrial Investment of a Commercial Bank

4.4 DATABASE FOR MIS OF THE INDUSTRIAL INVESTMENT/ CREDIT DIVISION OF A COMMERCIAL BANK

Microsoft Access comes with a database Wizard that takes step -by step through the process of creating a database. The following steps have been followed to design the database of industrial investment division of a commercial bank.

1. Determine the Purpose of the Database

The best way to do this is to write down a list of the reports and lists from where the database will be come out. This may seem a little backward at first but these reports should really have the reason to creating the database.

II. Determine the Field

This should be an easy step once is determined the purpose of the database and should have sketched some sample reports and lists, it should be also think about the type of fields such

as text, number, date etc. After field selection data type should be placed next to each field. A field's data type restricts what type of information it can be entered in a field. For example it cannot be possible to text into a number data type field.

III. Determine the Tables

Each table in the database should be based on only one subject. By breaking each subject into its own table it is easy to avoid redundant information and make the database more organized. The most straight-forward way to build a table is in Design View from scratch of MS Access, where adding fields to a table and specifying their data types is not much more than basic data entry.

IV. Determine the Primary Key

Each record in a table should have a primary key that uniquely identifies it. Each primary key value must be only one of its kinds in a table. A Branch ID would be a good example of field that could be used as a table's primary key.

V. Determine the Relationship Between Tables

The ID (primary & foreign keys) links the tables together. One of the linked fields should be the table's primary key.

VI. Sketch a Diagram of the Database

A diagram should be created of the database. Here it should have a box for each of the tables where table's field names are mentioned inside the respective boxes. Finally a line is drawn between the related fields in the tables.

A list of all tables/ entities and their respective fields & data type are shown in figure 4.6

<i>Table/Entity</i>	<i>Field Name</i>	<i>Data Type</i>	<i>Field Size</i>
Branch	Branch ID	AutoNumber	Long Integer
	Branch name	Text	50
	Zonal office	Text	50
	Branch phone no	Text	50
	Zone phone no	Text	50
Bank Limit & Liability	ID	AutoNumber	Long Integer
	Project ID	Number	Long Integer
	Liability Date with IBBL	Date/Time	dd-mm-yyyy
	Limit with IBBL	Number	Double
	Term loan/IPSM liability with IBBL	Number	Double
	W/C liability with IBBL	Number	Double
	Previous banker	Text	50
	Liability Date with previous Bank	Date/Time	dd-mm-yyyy
	Term loan liability with previous bank	Number	Double
	W/C liability with pre bank	Number	Double
Building	Building ID	AutoNumber	Long Integer
	Client Name	Text	60
	Building owner	Text	50
	Building amount	Text	50
	Building location	Text	200
	Value by client	Number	Double
	Value by branch	Number	Double
	Force Sales Value (FSV)	Number	Double
Dealing Officer	Officer ID	AutoNumber	Long Integer
	First name	Text	40
	Last name	Text	40
	Status	Text	30
	Education	Text	50
	Institute	Text	50
	Recruitment Date	Date/Time	Medium Date
Disbursement	ID	AutoNumber	Long Integer
	Project ID	Number	Long Integer

	Disbursement Date	Date/Time	Medium Date
	Term loan / IPSPM Disbursement (Tk million)	Number	Double
	Working Capital Disbursement	Number	Double
Group	Group ID	AutoNumber	Long Integer
	Group name	Text	30
	Main sponsor	Text	50
	Total investment with JBBL	Number	Double
	Investment as on date	Date/Time	Medium Date
	Number of concern business	Number	Integer
Investment	Investment ID	AutoNumber	Long Integer
	Project ID	Number	Long Integer
	Advice number	Text	50
	Sanction Date	Date/Time	Medium Date
	Year	Number	Integer
	Term Loan /IPSPM Sanctioned amount (Tk million)	Number	Double
	W/C Sanctioned Amount (Tk million)	Number	Double
	Purpose of investment	Text	50
	Gestation period	Text	50
	Expiry date	Text	50
	Rate of return	Text	50
	Repayment starting period	Text	50
	Mode of recovery	Text	50
	Advice content	Text	225
Land	Land ID	AutoNumber	Long Integer
	Client Name	Text	50
	Land owner	Text	50
	Land amount	Text	50
	Land location	Text	200
	Value by client	Number	Double
	Value by branch	Number	Double
	Force Sales Value (FSV)	Text	50
Machine	Machine ID	AutoNumber	Long Integer
	Client Name	Text	50
	Machine name	Text	50

	Model	Text	30
	Brand	Text	30
	Category	Text	30
	Unit price (in Million)	Number	Double
	Condition	Text	50
	Manufacturing company	Text	50
	Supplier	Text	50
	Country of origin	Text	25
	Country of made	Text	25
	Year of manufacturing	Text	12
	Source of power	Text	15
	Quantity	Number	Integer
	Total machine value	Text	50
Memo	Memo ID	AutoNumber	Long Integer
	Office note ID	Number	Long Integer
	Meeting type	Text	50
	Memo placed date	Date/Time	dd-mm-yyyy
	Memo number	Text	12
	Meeting number	Text	12
	Meeting date	Date/Time	dd-mm-yyyy
	Head of meeting	Text	30
	Memo decision	Text	150
	Memo decision in brief	Text	50
Office Note	Office Note ID	AutoNumber	Long Integer
	Client Name	Text	50
	Subject	Text	150
	Officer ID	Number	Long Integer
	Proposal received date	Date/Time	Medium Date
	Note submission date	Date/Time	dd-mm-yyyy
	Note submit to	Text	30
	Note final by	Text	30
	Note final date	Date/Time	Medium Date
Other Business	Decision	Text	150
	Business ID	AutoNumber	Long Integer
	Group ID	Number	Long Integer
	Concern Business	Text	50

	Name of the business	Text	50
	Nature of the business	Text	50
	Date of incorporation	Date/Time	Medium Date
	Banker	Text	40
	Term loan liability	Number	Double
	Liabilities as on date	Date/Time	dd-mm-yyyy
	W/C liability	Number	Double
	W/C liability as on date	Date/Time	dd-mm-yyyy
Outstanding	ID	AutoNumber	Long Integer
	Project ID	Number	Long Integer
	Overdue Date	Date/Time	dd-mm-yyyy
	Amount Due	Number	Double
	Overdue Principal	Number	Double
	Overdue Rent	Number	double
	Amount Outstanding (Tk million)	Number	Double
Project	Project ID	AutoNumber	Long Integer
	Client Name	Text	50
	Project name	Text	80
	Group ID	Number	Long Integer
	Sector	Text	30
	Sub sector	Text	30
	Nature of business	Text	90
	Company constitution	Text	50
	Date of incorporation	Date/Time	dd-mm-yyyy
	Project cost	Number	Long Integer
	Address	Text	70
	City	Text	25
	Phone	Text	30
	Fax	Text	30
	E-mail	Text	30
	Production capacity	Text	25
	Client's contribution (proposed)	Number	Double
	Bank's contribution (proposed)	Number	Double
Proposal	Client Name	Text	60
	Branch ID	Number	Long Integer
	Proposal type	Text	50

	Banking time with IBBL	Text	50
	Total primary security	Text	50
	Total secondary security	Text	50
	Pro Ref with date (Br)	Text	70
	Pro Ref with date (Zone)	Text	70
	Proposal received date (by dealing officer)	Text	50
	Officer ID	Number	Long Integer
	Proposal Subject	Text	225
	Manager name	Text	80
	Manager's Designation	Text	50
	Investment Officer	Text	50
	Zonal Head name	Text	80
	Zonal Head Designation	Text	50
Inquiry	Inquiry ID	AutoNumber	Long Integer
	Office note ID	Number	Long Integer
	Inquiry description	Text	100
	Inquiry placed to	Text	50
	Inquiry placed date	Date/Time	dd-mm-yyyy
	Inquiry received to Head Office	Date/Time	dd-mm-yyyy
	Inquiry feed back	Text	150
Recovery	ID	AutoNumber	Long Integer
	Project ID	Number	Long Integer
	Date of 1 st Installment Due	Date/Time	Medium Date
	Installment Size	Number	Double
	Number of Installment Due	Number	Integer
	Number of Installment Recovered	Number	Integer
	Amount Recovered (Tk million)	Number	Double
	Amount Fallen due (Tk million)	Number	Double
	Classified Loan Status	Text	Look Up
	Statement Month	Text	10
	Statement Year	Text	Integer
Sponsor	Sponsor ID	AutoNumber	Long Integer
	Client Name	Text	50
	Sponsor name	Text	50

	Address	Text	150
	Status	Text	20
	Extend of share	Text	15
	Education	Text	50
	Birth date	Date/Time	dd-mm-yyyy
	Phone	Text	30
	Modification of sponsor	Text	50
	Modification date	Date/Time	dd-mm-yyyy

Figure 4.6 : Database of the Industrial Investment/ Credit Division of Commercial Bank

CHAPTER-5

DEVELOPMENT OF THE SYSTEM

5.0 DEVELOPMENT OF THE SYSTEM

This chapter describes the design of user interface and development of application for investment database management by using MS Access. In developing stage, it was tried to make the user interface friendly as well as productive. Different forms have been made to enter data into the Management Information System database of industrial investment of a typical commercial bank. The input forms were so designed that all necessary inputs required for the system are covered. The output forms were designed considering the requirement of the end users of information.

For example the project entry form will be used when a client enter into the bank for getting any Investment/loan. A client may come at different time to get loan for different projects. So the client and its related information will be entered in Proposal Form & its corresponding project will go into the Project Form. All this information will come from the clients who are indent to get investment or loan from a bank. The client will submit this information to the prescribed forms, which is supplied from that bank (hard copy of investment form of the bank is shown in Annexure D). In addition to these forms the client may also submit different information in different customer's own format in time to time as per requirement of that bank. Example of the proposal entry form is shown in figure 5.1. Rest of the different entry forms which are required for the MIS of the investment division of a commercial bank are shown in Annexure A.

Proposal Entry

Client Name:

Branch Name:

Proposal type:

Banking time with IDOL:

Total primary security:

Total secondary security:

Proj Net with date (Dr):

Proj Net with date (Zone):

Proposal received date (onating nri):

Dealing officer:

Proposal Subject:

Manager name:

Manager's Destination:

Investment Officer:

Zonal Head:

Zonal Head Designation:

Record 1 of 1

Figure 5.1 : Proposal Entry Form

5.1 STORAGE OF DATA

All information entered in the entry form will be stored in the Table, which has been developed earlier. The database has been developed with the help of relational database technique of MS Access. The database is situated behind the entry form. When a data will be inputted inside the form it will be stored automatically to the corresponding Tables. Data can be accessed directly by opening the corresponding tables or form or query table. Different portfolio or profiles are made by using MS Access form. Two such forms have been made for this MIS. Profile of a particular client and query form of a particular project investment is shown in figure 5.2 and figure 5.3 respectively.

Proposal

Client Name: **Ms AG Textile Mills** Proposal Type: **HPBM**

Proposal Subject:

Dealing Officer: **Punvez Ahmed Khan** Branch Name: **Local Office**

Proposal Received Date (Dealing Off): Total Primary Security:

Total Secondary Security:

Project

Project name	Group Name	Sector	Sub sector
Ms AG Textile Mills		Weaving	

Pre Ref with date (Bry):

Pre Ref with date (Zone):

Record: **1** of **1**

Record: **1** of **1**

Figure 5.2 : Profile of a Particular Client

Query Form

Project name: **Us Youth Sparing**

Sector: **Weaving**

Investment

HPSM (Tk million)	Year
100.5	2002
600	1999

Record: **1** of **2**

Record: **1** of **7**

Figure 5.3 : Query Form of a Particular Project Investment.

Similar profile may be made as per requirement of the user or management.

5.2 QUERY

Query makes sense out of all thousands of jumbled needs and display exactly what is need to know by a user. Queries discover things like total projects have been realized within a certain period or the project where investment is done more than 10 million of a commercial bank. Queries are the stars of Microsoft Access. Different type of queries may be done by MS Access, these are simple select queries, parameter queries (which prompt the user for more information), cross tab queries (which summarize records in an easy understand format), action queries (which actually modify the records in the database).

As the access is a relational database, it's easy to establish a relationship between two or more tables and look at the information that goes together. Example of the design view of a query form is shown in Figure 5.4. By using the design view or simple query wizard or SQL tools of the MS Access all the possible queries may be done from this database as per requirement of the users/management (details of the query procedure by MS Access are shown in Annexure C).

Field	Table	Date	HPSM Disbursement	Sector
Project ID	Project	Disbursement	Disbursement	Project
Group By	Group By	Group By	Group By	Group By
Sort				Ascending
Show	☒	☒	☒	☐
Criteria				[Enter sector]

Figure 5.4 : Design View of a Query Form.

Some of the query/report of the MIS of investment/loan & advance division of a commercial bank are given below:

- a. Total Sanction Amount
- b. Total Disbursement
- c. Total Investment
- d. Sector Wise Investment
- e. Sector Wise Project Number
- f. Total Group
- g. Group Wise Investment
- h. Group Wise Performance
- i. Total Proposal Received By the Head Office
- j. District Wise Project
- k. Investment More Than a Certain Amount
- l. Total Proposal Passed By Executive Committee Within a Certain Period
- m. Total Proposal Passed By Board Meeting Within a Certain Period
- n. Total Proposal Passed By Management Committee Within a Certain Period
- o. Total Proposal Passed By Managing Director/Executive President Within a Certain Period
- p. Total Proposal Regard By Executive Committee Within a Certain Period
- q. Group Wise Main Sponsor with their Present Address and Phone Number
- r. Year Wise Project Realized by Project Investment/ Credit Division
- s. Year Proposal Deal by the Dealing Officer
- t. Branch Wise Proposal Received
- u. Branch Wise Project Received
- v. Graphical Presentation
- w. Total Projects have been realized within a certain period
- x. Total Projects are in under process within a certain period
- y. Total Over due Project
- z. Client wise investment
- aa. Branch wise investment
- bb. Monthly term loan & working capital statement of a client

5.3 GRAPHICAL PRESENTATION

Chart Wizard and Pivot Table Wizard tool of MS Access have been used to design the graphical presentation of different portfolio of the Investment. Prior to the design of the graphical form, data has to be prepared by using query table or from through extracting data from a single or multiple tables by fulfilling different conditions as per requirement of the users.

The sectored investment trained is designed, as it is the most requirement of the investment policy of a bank which is shown in figure 5.5.

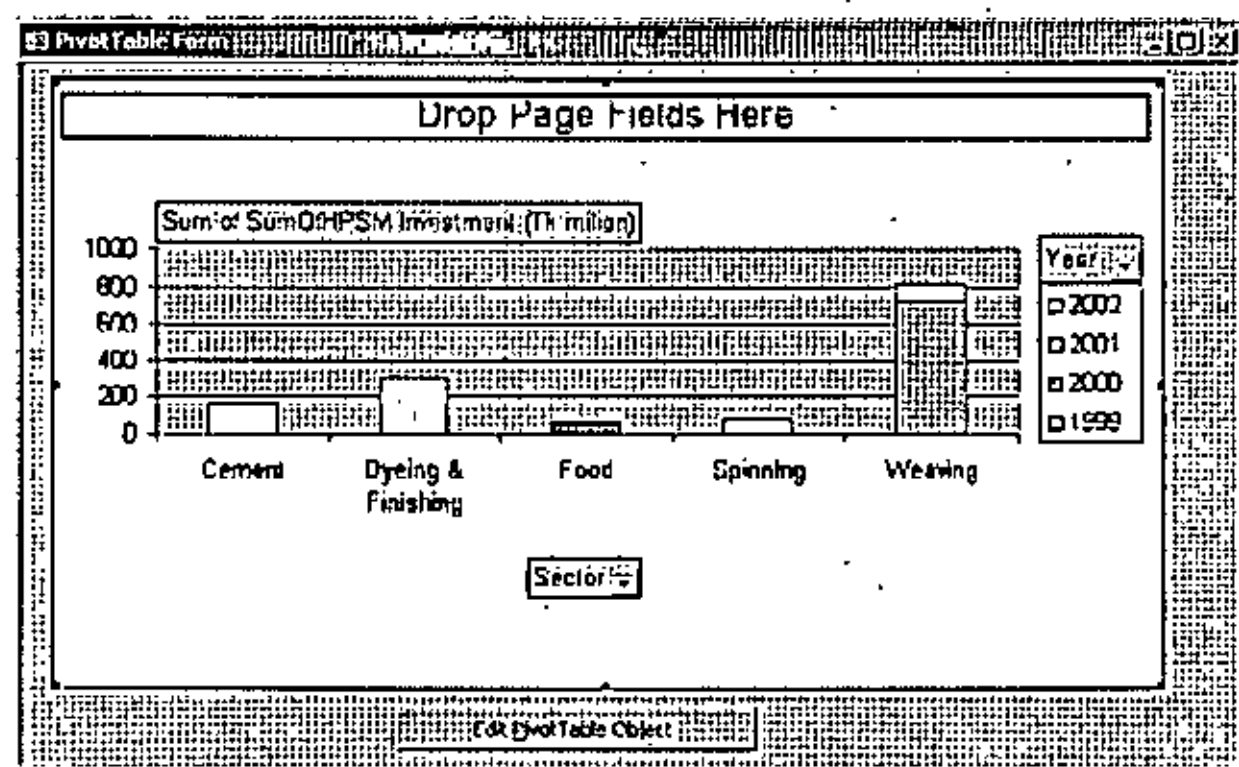


Figure 5.5: Graphical Presentation of the sector wise investment trained of a commercial bank (Developed through MIS)

Similar graphical forms may be made as per requirement of the user or management of the Bank.

5.4 REPORT

Different report may be created by using MS Access Report tool. Branch wise project list has been made as per example, which is shown in Figure 5.6. Individual client performance is also possible to find out from this MIS very promptly. Monthly performance statement (report) of a client is designed by using this Database, which is shown in figure 5.7.

Branch Wise Project List

<i>Branch name</i>	<i>Project name</i>	<i>Sector</i>
<i>Local Office</i>	M/s A G Textile Mills	Weaving
	M/s Global Beverage Co	Food
	M/s Youth Spinning	Weaving
	M/s Dignity Textile	Weaving
<i>Paltan</i>	M/s Zohar & Zohar Ltd	Dyeing & Finishing
	M/s Manan Spinning	Spinning
<i>Rajshaha</i>	M/s Anand Cement	Cement

Figure 5.6 : Report of the Branch Wise Project List.

Monthly performance statement of a client

Client name	
Project name	
Branch name	
Account Number	
Term loan sanctioned amount (Tk million)	
W/C sanctioned amount (Tk million)	
Sanction Date	
Disbursement Date	
Term loan/HPSM Disbursement (Tk million)	
Working Capital Disbursement (Tk million)	
Date of first installment due	
Expiry date	
Installment Size (Tk million)	
Number of Installment Due	
Amount due (Tk million)	
Number of Installment Recovered	
Amount Recovered (Tk million)	
Overdue Principal (Tk million)	
Overdue Rent (Tk million)	
Amount Outstanding (Tk million)	
Total primary security	
Total secondary security	
Classified Loan Status	
Statement Month	
Statement Year	

Figure 5.7 : Monthly Performance Statement (Report) of a Client

5.5 BENEFIT OF THIS COMPUTERIZED MIS IN INVESTMENT/LOAN DIVISION OF A COMMERCIAL BANK

By using this Computerized MIS the Industrial Investment or Credit Division of a commercial bank will be benefited in different ways. For example if the management of the bank want to know what was the over all investment performance of a particular year suppose 1996 then it will be very easy to find out this profile from the computerized database just by rearranging or processing the existing data through computer keyboard or mouse. This may take only a few minutes for a concern user of the database but if it was paper based MIS it may take about a few hours to a few days. A lot of query may be possible to find out from a computerized MIS. Concern officer/ other user to middle management even the top management may use the database as per their capacity independently. This easy access of all the users will prompt the over all efficiency of the bank. In the monitoring stage the MIS is also very essential for the management of a bank. This MIS will help the management to monitor the individual client's loan status at any time very efficiently. The presentation of different information related to the investment client will be very easy and sophisticated by using this MIS. So by using this MIS a bank may be very much benefited in different aspect to run its main business concern i.e investment/ loan & advance/credit division.

CHAPTER-6

TEST RUN, RESULT & DISCUSSION

6.0 TEST RUN THE PROGRAM

Before run the program MS Access has to install in the computer. If the MS Access is already been installed, there is no need to install it again. The MS Access file that has been created by the name of MIS has to be opened to run the program. After open the file the MIS database dialog box will be opened in the MS Access platform. From this dialog box – Tables, Queries, Forms or Reports may be opened as per requirement of the user by selecting the object through mouse or keyboard. The user can enter the data directly to the corresponding table or to the entry forms.

6.1 RESULT

Some data of a commercial bank has been entered inside the database for trial run the program. After entering the data through different entry forms it is been found that all the corresponding data stores in the corresponding Tables.

Test run has successfully done. The query as per requirement of the users has been done perfectly. Graphical presentation has also been found as desired form. Report could be generated as per requirement of the users.

6.2 DISCUSSION

As investment or loan section is the main business concern of a commercial bank it should be computerized database system. Some of the foreign banks & a few of local banks have converted their investment business in computerized MIS.

In this paper the investment policy/system or process of IFIC bank, Basic Bank, Islami Bank Bangladesh limited, Janata bank has been studied to design the MIS of the Industrial investment or credit division. The main objective of this paper is to develop a computer based MIS of Investment business of a commercial bank in Bangladesh.

MS Access of Microsoft Corporation has been used to develop the database i.e. the MIS of the investment system/process of a commercial bank.

To operate this program efficiently the users should be familiar with the uses of MS Access application package.

By using this program, it will be easier to operate the investment sanction of a bank. The management will be able to keep control over the whole system more efficiently. Suppose by using this package management can know any time what is the overall condition of the investment section. Suppose, how many proposal has been matured & what is the file position up to certain date may be known by this program within in a few minutes. It will also be possible to know who & how an officer is engaged with what project for a certain period.

Through this package the management or any concern officer may be able to access different information about the investment condition in different format as per requirement. Suppose how much money has been investment up to a certain period, what is the branch wise investment condition, how much money has been invested in different sectors, what is the year wise investment in different sectors, etc may be possible to find out by this database.

Different graphical presentation may be made by using this MIS, which was done earlier in MS Excel. Now it will be easier to find out such graph without entered data separately because the existing data that have already been stored in the database will be linked with the graph as per requirement of the users. Suppose sector wise investment trained, branch wise investment trained etc. may be possible to find out.

By using this database it will be very easy to make portfolio of the investment policy or plan, which was done earlier by accessing data at different sources and it was very much time consuming. By using this database it will be very much easy to present data at different committee as per requirements of the committee to take necessary action very promptly.

After sanctioning of the investment, monitoring also be done efficiently by using this package, i.e what is the disbursement position up to a certain date, what is the outstanding & recovery of a particular client may be possible to find out easily. Branch wise

performance also be possible to find out by using this package provided all the up to dated data/information are stored in the data base table.

6.3 SCOPE & LIMITATION

To make this program more generic for the uses of different commercial bank, some additional information may be added with this package

To make it more customized the MIS may be developed in different platform like, SQL Server & Oracle from where multiple users will be able to access it at a time. High security will be possible to give this database

To make the package more reliable, it is essential to give the system some privilege/permission to the users as per decision of the top management or system administrator. In Access it is possible to give some user level permission as per requirement. Some other security such as file/group password etc. may be possible to add with this database file. It may be more powerful in the sense of password/user or group level permission if the database is done through SQL and Oracle platform.

The basic idea has been generated by developing this MIS through MS Access. In future it may be converted in SQL Server in addition to Oracle or by any equivalent software to make it more powerful. To make it more customized different computer software language such as Visual basic, C++, Java etc. may be used

6.4 CONCLUSION

Commercial banking sector of our country now a day's characterized by widespread loan default and delinquency. Inadequate bank supervision and long term loan against short maturity funds are some of the major reasons behind the problem. The repayment performance of the existing loans is not pleasing enough, which is also due to inefficient investment/credit delivery and lack of supervision. The prevalence of this problem reduces the productivity of capital and the level of investment. This project work sheds light on management of MIS for term Investment/loan as well as other short-term loan in the

industrial sector and the factors that affect the repayment performance of the Borrowers and the relationship among those.

There exists a strong relationship of loan repayment performance of borrowers with strength of supervision, experience of the entrepreneurs and compliance of the borrowers with covenants. On the other hand, strength of supervision and selection of borrower cannot be done properly and effectively without a properly managed MIS of the investment/credit portfolio of the bank. In this project, the endeavor was to build a MIS for the investment division of the bank to facilitate the bank management in taking correct decisions and appropriate measures at appropriate time. The study examined the investment/loan management system of project investment/loan & advance division of the commercial Bank in Bangladesh and tried to give a complete computerized MIS solution, which is simple enough to handle the requirements of the division.

Monitoring of loan is one of the key factors in credit management. Loan repayment performance is found to be significantly dependent on strength of supervision. Developing an early awareness system is necessary to identify the probable adverse situation of bank-invested business for taking necessary steps. MIS is the first step to the system. So, a developing and maintaining a computer aided MIS is not only necessary but also indispensable in today's first evolving Banking scenario.

REFERENCE AND ANNEXURE

REFERENCE

1. Abraham Silverschatz , Henry F. Coith, S. Sudarshan "Database System Concept" ,The MccGraw-Hill Companies, Inc. - International Editions, Malaysia-1997 .
2. Ian Sommerville , "Software Engineering" Pearson Education Ltd -Second Indian Reprint-2002
3. James A. Senn, "Information Technology in Business", Prentice Hall International Edition Second Edition , New Jersey- 1998
4. Elias M. Award " System Analysis & Design" Galgotia Publication (P) Ltd. – Second Edition-1999.
5. Paul Boijj et al., Business Information Systems: Technology, Development and Management, Prentice Hall International Edition -1999
6. A.K. Gupta " Management Information Systems", S. Chand & Company Ltd- 2000
7. United Nation Development Program Publication "Manual for Preparation of Industrial Projects", –1980
8. United Nation Development Program Publication "Manual for Evaluation of Industrial Projects", –1980
9. R.L Pitalae "Project Appraisal Technique" -1982
10. Annual Report of "Bangladesh Bank" 2000-2001, Dhaka
11. Dr. Sujit Saha, " Small Enterprise Project Identification and Formulation for Financing" BIBM, Mirpur, Dhaka.
12. Rahaman, M " Bangladesh Financial Sector Reforms: Reflection on Recent Measures", The Daily Star, Dhaka, April,26,2003

ANNEXURE - A

FIGURE OF DIFFERENT ENTRY FORMS

Project ID		Project cost	
Client name	M/s Youth Group	Date of incorporation	
Project name	M/s Youth Spinning	Phone	
Group name	Youth	Fax	
Sector	Weaving	E-mail	
Sub sector	Weaving	Production capacity	
Nature of business	Export Oriented Weaving Industry	Client's contribution (proposed)	
Company constitution	Private Limited	Bank's contribution (proposed)	
Address			
City			

Record: 14 of 14

Figure : Project Entry Form

Sponsor ID		Modification of Sponsor	
Client Name		Modification Date	
Sponsor Name			
Address			
Status			
Period of Share			
Education			
Date of Birth			
Phone			

Record: 14 of 14

Figure : Sponsors Entry Form

Figure : Entry Form of Bank Limit & Liability

BR Branch	
Branch ID	1
Branch Name	Local Office
Zonal Office	
Branch Phone no	
Zonal Phone no	
Record: 11 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	

Figure : Entry Form of Branch

Figure : Entry Form of Building

Officer ID	
First name	Md. Abu
Last name	Sayed
Status	Officer
Education	Mechanical Engineer
Institute	BUET
Recruitment Date	

Record: 14 of 17

Figure : Entry Form of Dealing Officer

The image is a high-contrast, black and white scan of a document page. It appears to be a form or a page with a grid, but the text is almost entirely illegible due to heavy noise and artifacts. Only faint outlines of text and some structural elements like a header and footer are visible. The page is oriented horizontally.

Figure : Entry Form of Disbursement

Figure : Entry Form of Group

Machine Entry Form	
Machine Name	Machine Number
Machine Type	Machine Location
Machine Status	Machine Date
Machine Description	Machine Remarks
Machine Operator	Machine Supervisor
Machine Maintenance	Machine Repair
Machine Parts	Machine Tools
Machine Materials	Machine Accessories
Machine Consumables	Machine Supplies
Machine Expenses	Machine Income
Machine Profit	Machine Loss
Machine Net	Machine Total

Figure : Entry Form of Machine

Memo Entry Form	
Memo Title	Memo Number
Memo Date	Memo Location
Memo Status	Memo Date
Memo Description	Memo Remarks
Memo Operator	Memo Supervisor
Memo Maintenance	Memo Repair
Memo Parts	Memo Tools
Memo Materials	Memo Accessories
Memo Consumables	Memo Supplies
Memo Expenses	Memo Income
Memo Profit	Memo Loss
Memo Net	Memo Total

Figure : Entry Form of Memo

Office Note	
Office Note ID	1
Client name	M/s. Youth Group
Subject	Proposal for Sanctioning of HPSM Limit of Youth Group
Dealing Officer	Faraz Ahmed Khan
Proposal received date	
Note submission date	
Note submit to	
Note final by	
Note final date	
Decision	

Record: 1 of 1

Figure : Entry Form of Office Note

Other Business	
Business ID	AutoNumber
Group name	
Concern Business	
Name of the business	
Nature of the business	
Date of incorporation	
Banker	
Term loan liability	
Liabilities as on date	
W.C liability	
W.C liability as on date	

Record: 1 of 1

Figure : Entry Form of Other Business

Figure : Entry Form of Outstanding

The image is a high-contrast, black and white scan of a document page. It appears to be a form or a page with a grid, possibly a ledger or a table. The page is heavily degraded with significant noise and artifacts, making the content almost entirely illegible. The page appears to have a header section at the top, followed by several lines of text and a large, complex table or form structure occupying the majority of the page. The right side of the page is mostly blank, suggesting a two-page spread where the content continues on the next page.

Figure : Entry Form of Recovery.

The image shows a document titled "Entry Form of Inquiry" at the top center. The document is heavily degraded with a high level of contrast, resulting in a grainy, black-and-white appearance. It contains several horizontal lines that likely represent text input fields. On the right side, there is a large, empty rectangular box, possibly for a signature or a stamp. The overall layout is that of a standard inquiry form, but the content is completely unreadable due to the image quality.

Figure : Entry Form of Inquiry

ANNEXURE – B

DATABASE SECURITY SYSTEM IN MICROSOFT ACCESS

There are different strategies for controlling the level of access to a user's Microsoft Access database (*Microsoft Access database: A collection of data and objects, such as tables, queries, or forms, related to a particular topic or purpose. The Microsoft Jet database engine manages the data.*) and its objects. These strategies are briefly described below and are roughly arranged from least to most secure

Encryption/Decryption

The simplest method of protection is to encrypt the database. Encrypting a database compacts the database file and makes it indecipherable by a utility program or word processor. Encrypting an unsecured database has no effect because anybody can open the database and gain full access to all objects in the database. Encryption is particularly useful when a user transmits a database electronically, or when his/her store it on floppy disk, tape, or compact disc.

Before a user can encrypt or decrypt a Microsoft Access database, a user must be either the owner (*owner: When security is being used, the user account that has control over a database or database object. By default, the user account that created a database or database object is the owner.*) of the database or, if the database is secured, a member of the Admins group (*Admins group: The system administrator's group account that retains full permissions on all databases used by a workgroup. The Setup program automatically adds the default Admin user account to the Admins group.*) of the workgroup information file (*workgroup information file: A file Access reads at startup that contains information about the users in a workgroup. This information includes users' account names, their passwords, and the groups of which they are members.*) that contains the accounts used to secure the database. The user must also be able to open the database in exclusive (*exclusive: A type of access to data in a database shared over a network. When the user opens a database in exclusive mode, the user prevents others from opening the database.*) mode, which means the user must have Open/Run and Open Exclusive permissions (*permissions: A set of attributes that specify what kind of access a user has to data or objects in a database.*). Decrypting a database reverses the encryption

Show or Hide Objects in the Database Window

Another method of protecting the objects in user's database from casual users is to hide the objects in the Database window. This method of protection is the least secure because it is relatively simple to show any hidden objects

Using Startup Options

The user can use the startup options to specify settings such as a startup form, which opens automatically when his/her database opens, and his/her database application title and icon. The user can also hide the Database window, and set his/her own switchboard form. In a new database, the startup properties do not exist until a user makes a change to the default settings in the **Startup** dialog box.

With a Password

Another simple method of providing security is to set a password for opening the Microsoft Access database. Once a password is set, a dialog box that requests the password will be displayed whenever the database is opened. Only users who type the correct password will be allowed to open the database. This method is secure (Microsoft Access encrypts the password so that it can't be accessed by reading the database file directly), but it only applies to opening a database. Once a database is open, all its objects are available to the user (unless other types of security have already been defined, as described later in this topic). For a database that is shared among a small group of users or on a single computer, setting a password is often all that is required.

Do not use a database password if a user will be replicating (*database replication: The process of creating two or more special copies (replicas) of an Access database. Replicas can be synchronized—changes made to data in one replica, or design changes made in the Design Master, are sent to other replicas.*) a database. Replicated databases can't be synchronized (*synchronization: The process of updating two members of a replica set by exchanging all updated records and objects in each member. Two replica set members are synchronized when the changes in each have been applied to the other.*) if database passwords are defined.

With User-Level Security

The most flexible and extensive method of securing a database is called user-level security (*user-level security: When using user-level security in an Access database, a database administrator or an object's owner can grant individual users or groups of users specific permissions to tables, queries, forms, reports, and macros.*) With user-level security, a user can establish different levels of access to sensitive data and objects in his/her database. To use a database secured with user-level security, users type a password when they start Microsoft Access. Access reads a workgroup information file (*workgroup information file: A file Access reads at startup that contains information about the users in a workgroup. This information includes users' account names, their passwords, and the groups of which they are members.*), where each user is identified by a unique identification code. The level of access and the objects that a user has access to be established based on this identification code and password.

Although setting up user-level security on most databases can be a daunting task, the User-Level Security Wizard makes it easy to quickly secure his/her Access database in a one-step process. Furthermore, by implementing common security schemes, the User-Level Security

Wizard minimizes and may even eliminate the need to use the Security command from the Tools menu

After running the User-Level Security Wizard, a user can create his/her own groups of users and assign or remove permissions (*permissions: A set of attributes that specify what kind of access a user has to data or objects in a database.*) for various users or group of users for a database and its existing tables, queries, forms, reports, and macros. The user can also set the default permissions that Microsoft Access assigns for any new tables, queries, forms, reports, and macros that are created in a database. Permissions are granted to groups and users to regulate how they are allowed to work with each table, query, form, report, and macro in a database

Preventing users from replicating a database, setting passwords, or setting startup options

In a multi-user environment, there are many situations where he/she might need to protect his/her database. The user might want to prevent users from replicating (*replication: The process of copying a database so that two or more copies can exchange updates of data or replicated objects. This exchange is called synchronzation.*) a database. Replicating a database allows a user to make a copy of a shared database and also adds fields and makes other changes to the current database. The user might want to prevent users from setting a database password, because if they do, no other user will be able open the database without providing that password. The user might also want to keep users from changing startup properties that specify features such as custom menus, custom toolbars (*toolbar: A bar with buttons and options that a user uses to carry out commands. To display a toolbar, use the Customize dialog box (point to Toolbars on the View menu and click Customize).*). To see more buttons, click **Toolbar Options** at the end of the toolbar.), or the startup form.

If a shared database doesn't have user-level security (*user-level security: When using user-level security in an Access database, a database administrator or an object's owner can grant individual users or groups of users specific permissions to tables, queries, forms, reports, and macros.*) defined, a user can't prevent a user from making any of these changes. When user-level security is defined, a user or group must have Administer permission (*permissions: A set of attributes that specify what kind of access a user has to data or objects in a database.*) for the database to replicate a database, set a database password, or change its startup properties. Only members of the Admins group (*Admins group: The system administrator's group account that retains full permissions on all databases used by a workgroup. The Setup program automatically adds the default Admin user account to the Admins group.*) of the current workgroup (*workgroup: A group of users in a multi-user environment who share data and the same workgroup information file.*) have Administer permission.

If a user or group currently has Administer permission for a database, removing that permission will prevent the user or group from making any of these changes. If a user needs to allow a user or group to perform any of these tasks, a user can assign the Administer permission to that user or group. The user can't control access to these three tasks independently

Securing Microsoft Visual Basic for Applications (VBA) Code

There are two different ways The user can protect Microsoft Visual Basic for Applications (VBA) (*Visual Basic for Applications (VBA): A macro-language version of Microsoft Visual Basic that is used to program Windows applications and is included with several Microsoft applications.*) code in standard modules (*module: A collection of declarations, statements, and procedures stored together as one named unit. There are two types of modules. standard modules and class modules.*)and class modules (*class module: A module that can contain the definition for a new object. Each instance of a class creates a new object. Procedures defined in the module become properties and methods of the object. Class modules can exist alone or with forms and reports.*)(such as code behind forms and reports).

The user can secure his/her code with a password, which he/she enter once per session. The password prevents unauthorized users from editing, cutting, pasting, copying, exporting, and deleting VBA code

When his/her VBA code is error-free and working correctly, the user can remove it from his/her database by saving it as an MDE file. This protects the intellectual property of user's r code, and prevents modifications to the design of forms, reports, and modules in user's r database.

Securing Data Access Pages

Data access pages (*data access page: A Web page, published from Access that has a connection to a database. In a data access page, a user can view, add to, edit, and manipulate the data stored in the database. A page can also include data from other sources, such as Excel*) are HTML (*HTML: The standard markup language used for documents on the World Wide Web. HTML uses tags to indicate how Web browsers should display page elements such as text and graphics and how to respond to user actions.*) pages that contain references to the data in a Microsoft Access file (*Microsoft Access file: An Access database or Access project file. An Access database stores database objects and data in an .mdb file. A project file doesn't contain data and is used to connect to a Microsoft SQL Server database.*) However, the data access pages aren't actually stored in the Access file; they are stored as HTML files either in the local file system, in a folder on a network share, or on an HTTP (*HTTP: Internet protocol that delivers information on the World Wide Web. Makes it possible for a user with a client program to enter a URL (or click a hyperlink) and retrieve text, graphics, sound, and other digital information from a Web server.*) server. For this reason, Microsoft Access has no control over the security of data access page files. To protect the data access page, the user must secure its link and HTML file by using the file system security of the computer where the user has stored these files. To protect the data accessed by the page, a user must either secure the database that the page is connected to or configure Microsoft Internet Explorer security settings to prevent unauthorized access.

ANNEXURE – C

DETAILS OF QUERY OPTIONS IN MICROSOFT ACCESS

About Types of Queries

The user can query to view, change, and analyze data in different ways. User can also use them as a source of records for forms, reports, and data access pages (*data access page: A Web page, published from Access that has a connection to a database. In a data access page, the user can view, add to, edit, and manipulate the data stored in the database. A page can also include data from other sources, such as Excel.*). There are several types of queries in Microsoft Access.

Select Queries

A select query is the most common type of query. It retrieves data from one or more tables and displays the results in a datasheet where he/she can update the records (with some restrictions). User can also use a select query to group records and calculate sums, counts, averages, and other types of totals.

Parameter Queries

A parameter query is a query that when run displays its own dialog box prompting the user for information, such as criteria (*criteria: Conditions that specify to limit which records are included in the result set of a query or filter. For example, the following criterion selects records for which the value for the Order Amount field is greater than 30,000: Order Amount > 30000.*) for retrieving records or a value the user wants to insert in a field. User can design the query to prompt him for more than one piece of information; for example, he/she can design it to prompt him/her for two dates. Access can then retrieve all records that fall between those two dates.

Parameter queries are also handy when used as the basis for forms, reports, and data access pages. For example, the user can create a monthly earnings report based on a parameter query. When the user prints the report, Access displays a dialog box asking for the month that he/she want the report to cover. The user enters a month and Access prints the appropriate report.

Cross tab Queries

The user can use crosstab queries to calculate and restructure data for easier analysis of his/her data. Crosstab queries calculate a sum, average, count, or other type of total for data that is grouped by two types of information — one down the left side of the datasheet and another across the top.

Action Queries

An action query is a query that makes changes to or moves many records in just one operation. There are four types of action queries:

- **Delete Queries** A delete query deletes a group of records from one or more tables. For example, the user could use a delete query to remove products that are discontinued or for which there are no orders. With delete queries, the user always delete entire records, not just selected fields within records.
- **Update Queries** An update query makes global changes to a group of records in one or more tables. For example, the user can raise prices by 10 percent for all dairy products, or he/she can raise salaries by 5 percent for the people within a certain job category. With an update query, he/she can change data in existing tables.
- **Append Queries** An append query adds a group of records from one or more tables to the end of one or more tables. For example, suppose that the user acquire some new customers and a database containing a table of information on those customers. To avoid typing all this information into his/her own database, he/she would like to append it to his/her Customers table.
- **Make-Table Queries** A make-table query creates a new table from all or part of the data in one or more tables. Make-table queries are helpful for creating a table to export to other Microsoft Access databases (*Microsoft Access database: A collection of data and objects, such as tables, queries, or forms, related to a particular topic or purpose. The Microsoft Jet database engine manages the data.*) or a history table that contains old records

SQL Queries

An SQL query is a query the user create by using an SQL statement (*SQL string/statement: An expression that defines an SQL command, such as SELECT, UPDATE, or DELETE, and includes clauses such as WHERE and ORDER BY. SQL strings/statements are typically used in queries and in aggregate functions*). The user can use Structured Query Language (SQL) to query, update, and manage relational databases such as Access

When a user creates a query in query Design view (*Design view: A window that shows the design of these database objects: tables, queries, forms, reports, macros, and data access pages. In Design view, a user can create new database objects and modify the design of existing ones.*), Access constructs the equivalent SQL statements behind the scenes for a user. In fact, most query properties in the property sheet in query Design view have equivalent clauses and options available in SQL view (*SQL view: A window that displays the SQL statement for the current query or is used to create an SQL-specific query (union, pass-through, or data definition). When a user creates a query in Design view, Access constructs the SQL equivalent in SQL view.*). If a user wants, he/she can view or edit the SQL statement in SQL view. However, after a user make changes to a query in SQL view, the query might not be displayed the way it was previously in Design view

Some SQL queries, called SQL-specific queries (*SQL-specific query: A query that consists of an SQL statement. Sub queries and pass-through, union, and data-definition queries are SQL-specific queries.*), can't be created in the design grid (*design grid: The grid that a user can use to design a query or filter in query Design view or in the Advanced Filter/Sort window. For queries, this grid was formerly known as the QBE grid.*). For pass-through (*pass-through query: An SQL-specific query a user use to send commands directly to an ODBC database server. By using pass-through queries, the user work directly with the tables on the server instead of having the Microsoft Jet database engine process the data.*), data-definition (*data-definition query: A SQL-specific query that contains data definition language (DDL) statements. These statements allow the user to create or alter objects in the database*), and union queries (*union query: A query that uses the UNION operator to combine the results of two or more select queries.*), the user must create the SQL statements directly in SQL view. For sub queries (*sub query: An SQL SELECT statement inside another select or action query.*), user enter the SQL in the **Field** row or the **Criteria** row of the query design grid.

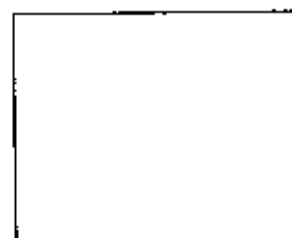
ANNEXURE – D

**HARD COPY OF DIFFERENT BANK FORMS
OF INVESTMENT PROPOSAL**


IFIC BANK LIMITED

ইফিচি ব্যাংক লিমিটেড ইফিচি ব্যাংক লিমিটেড ইফিচি ব্যাংক লিমিটেড

Branch

 Ref. No. _____
 Date _____

 Photo of Chairman
 Managing Director

 The Manager
 IFIC Bank Limited
 Branch

**APPLICATION FOR CREDIT FACILITY
 ON ACCOUNT OF LIMITED COMPANY
 (To be filled in by the applicant)**

Dear Sir,

We desire to avail Credit Facility from the IFIC Bank Limited, and for this purpose, we furnish the following information/Particulars for necessary consideration:

I. PARTICULARS OF APPLICANT(S) & BUSINESS:

a)	Name of the Applicant		
b)	Account No. and date opened		
c)	Nature of Company	☐ Private Ltd	☐ Public Ltd
d)	No. and Date of Registration/Incorporation: (Attested photocopy alongwith MA & AA & list of existing Directors with present address to be enclosed)		
e)	Date of Commencement of Business		
f)	Address-Registered Office		
g)	Business Address		
h)	Telephone, Telex, Fax, Internet No.		
i)	Factory Address		
j)	Telephone / Fax / Telex / Internet No.		
k)	Import Registration No., date of issuance and validity	Import Reg. No. _____ Date _____ Validity to _____	
l)	Export Registration No., date of issuance and validity	Export Reg. No. _____ Date _____ Validity _____	
m)	Income Tax TIN/GIR No. and Amount Tax paid (last assessment copy of latest return submitted to be enclosed)	i) TIN / GIR NO. _____ ii) Amount Tax Paid Tk. _____ iii) Assessment Year, _____	
n)	Nature of Business i) Main ii) Allied		
o)	Name of Allied Concern		
p)	Name of Group		

Signature of the applicant

2. NAMES & OTHER PARTICULARS OF THE DIRECTORS (IF NEEDED SEPARATE SHEET MAY BE USED) :

Name with Father's / Husband's Name	Address with telephone / tele. No.			Share in the Company	Percentage
	Office / Business	Residence	Permanent		

3. PARTICULARS OF EXISTING CREDIT FACILITIES : (In case of renewal proposal)

Nature of facility(ies)	Limit	Outstanding	Rate of interest /Cum	Security	Expiry	Remarks
Total						

4. CREDIT FACILITY(IES) APPLIED FOR (FRESH/RENEWAL) :

Nature of facility(ies)	Amount of limit applied for	Purpose	Repayment terms
a)			
b)			
c)			
d)			
e)			
f)			
Total			

5. SECURITY OFFERED WITH DESCRIPTION :

Type of Security(ies)	Existing	Value	Owner of security & relationship with applicant	Additional	Value	Owner of security & relationship with applicant
a) Primary security (in case of merchandise latest stock report to be submitted)						
b) Collateral Security						
c) Other Security(ies) (To be Specified)						
Total						

COLLATERAL SECURITY HAS BEEN DULY VALUATED BY M/S _____

AND VALUED AT TK. _____

6. DEBT SECURITY RATIO = Total Facility / Debt : Collateral Security Value = (required at least 1 : 2)

Signature of the applicant

7. INSURANCE COVERAGE

- a) Name of Insurance Company :
- b) Amount of Coverage :
- c) Nature of risk covered with Bank mortgage clause :
- d) Policy number & Expiry .

8. PARTICULARS OF ANY OTHER FACILITIES BEING AVAILED OF BY THE APPLICANT:

- a) BRANCH OF IFIC BANK OR FROM ANY OTHER BANK TO BE FURNISHED BELOW :

Name of the Bank/ Branch	Nature of Limit	Date of Sanction	Amount of Limit	Expiry Date & status	Amount Outstanding	Security & value thereof

b) LIABILITIES OF THE APPLICANT AND ANY OF ITS DIRECTORS WITH IFIC BANK (IF ANY)

Name of the Account	Name of the Branch	Nature of liability	Limit	Amount Outstanding	Rate of Interest	Expiry date and status	Security & value thereof

c) LIABILITIES OF THE APPLICANT AND ANY OF ITS DIRECTORS WITH OTHER BANKS (IF ANY)

Name of the Account	Name of the Branch	Nature of liability	Limit	Amount Outstanding	Rate of Interest	Expiry date and status	Security & value thereof

 Signature of the applicant

9. IN CASE HYPOTHECATED & PLEDGED STOCK CONSTITUTE PRIMARY SECURITY THE FOLLOWING PARTICULARS TO BE FURNISHED SUPPORTED BY SEPARATE STOCK REPORT FOR HYPOTHECATION & PLEDGE. (If not, write not applicable for a & b below)

a) Particulars of Existing stock:

(Taka in thousands)

Description of the stock	Value
b) Hypothecation :	
i) Pledge :	
ii) Source of Procurement Determination of value & security arrangement to be clearly stated.	

b) Particulars of the Show Room/Godown/Factory/(Where the stock under hypothecation, pledge, L/M are held).

Shed Room/Godown/Factory	Location / Address	Nature of construction and uses	Owned or rented (If rented the name and address of owner and validity of lease agreement)	Proximity from the Branch
1. Shop				
2. Show Rooms				
3. Godown				
4. Factory				

10. VOLUME OF PURCHASE, SALE, PROFIT & LOSS OF LAST 3 YEARS :

Year	Total Purchase	Total Sale	Net Profit / (loss)	Remarks

* Last three years financials to be attached including cash flow forecast where deemed necessary.

Significance of the experiment

11. PARTICULARS OF EXPORT, IMPORT AND OTHER BUSINESS THROUGH IFIC BANK DURING LAST 3 YEARS.

(Amount in thousand)

Year	Export		Import		Other business (to be specified) e.g. Remittance, I/C etc.	Remarks
	No. of bills	Amount in \$	No. of I/C	Amount in \$	Amount in Taka	

12. PARTICULARS OF EXPORT, IMPORT AND OTHER BUSINESS THROUGH OTHER BANKS (If any) DURING LAST 3 YEARS.

(Amount in thousand)

Year	Export		Import		Other business (to be specified) e.g. Remittance, I/C etc.	Remarks
	No. of bills	Amount in \$	No. of I/C	Amount in \$	Amount in Taka	

13. DESCRIPTION OF PERSONAL PROPERTY AND ASSETS OF THE DIRECTORS, (separate sheets to be used for each of the Directors).

(Amount in thousand)

Name	Movable		Immovable	
	Description	Value	Description	Value

14. NET WORTH OF THE INDIVIDUAL DIRECTOR :

1. Mr. Tk
2. Mr. Tk
3. Mr. Tk

(Branch should calculate the net worth of individual directors in separate sheet)

Signature of the applicant

15. LIABILITIES OF THE SISTER CONCERNS WITH IFIC BANK LTD.

Name of the Borrower	Name of the Bank/Branch	Nature of Liability	Limit	Amount Outstanding	Expiry date and status	Security & value thereof

16. LIABILITIES OF THE SISTER CONCERNS (IF ANY) WITH OTHER BANK.

Name of the Borrower	Name of the Bank/Branch	Nature of Liability	Limit	Amount Outstanding	Expiry date and status	Security & value thereof

17. ASSESSMENT OF WORKING CAPITAL REQUIREMENT
(where working capital finance is required for manufacturing unit)

Particulars	Total requirement	Less existing stock	Net requirement	Amount
a) months imported raw material				
b) months local raw material				
c) months goods under process of production				
d) months finished goods in stock				
e) months spare parts & accessories				
f) months Receivable				
g) months other production expenses				
h) Requirement of working capital				
i) Less margin				
j) Requirement of working capital from the Bank				

Signature of the applicant

18. FINANCIAL STATEMENT IN BRIEF AS EXTRACTED FROM THE BALANCE SHEET FOR LAST 3 YEARS AS ON.....

ASSETS AND LIABILITIES

19.....

19.....

19.....

CURRENT ASSETS :

Cash in hand / at Bank

Inventory/stocks

Receivables

Other current assets

Total Current Assets

NON CURRENT ASSETS :

Land

Building

Machinery & Equipment

All other non current assets

Total Non-Current assets

Total Assets

CURRENT LIABILITIES :

Cash Credit/Overdraft

Short Term Loan (Principal)

Accounts Payable

All other current liabilities

Total Current Liabilities

NON CURRENT LIABILITIES

Long Term Loan

All other non-current liabilities

Total non-current liabilities

Total Liabilities

EQUITY :

Paid-up Capital

Reserves

Retained Earnings

Net worth of the Company

Total Liabilities and equity

CASH FLOW FROM OPERATING ACTIVITIES :

Net Profit / (Net Loss)

Plus Depreciation

Minus Dividend Paid

Accounts Payable Increase / (Decrease) :

Receivables (Increase) / Decrease

Inventory (Increase) / Decrease

+/- Other Non Cash Adjustment

Note : Balance sheet and profit & Loss account of last 3 years to be submitted.

Signature of the applicant



19. WE DO HEREDY DECLARE AND CONFIRM THAT :-

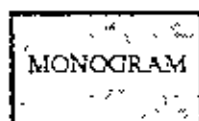
- a) the information and particulars furnished in this application are correct and we have not concealed any required information
- b) we shall not avail Credit facility from any other banks / financial institutions without prior permission from HFC Bank, if HFC Bank sanctions the Credit Facility(s) applied for ,
- c) if it is proved subsequently that we have concealed any information / particulars with ulterior motive in order to get the credit facility(s) from HFC Bank, we shall be liable as per prevailing law of the land ;
- e) we shall supply any information / particulars as and when called for by the HFC Bank and we shall extend all necessary co-operation to the Bank and shall abide by the existing rules, terms and conditions of the Bank and any rules, terms and conditions to be imposed by the Bank in future in connection with the credit facility(s) allowed to be allowed in my/our favour.

Signature of the applicant(s) and seal

Examined and verified on the basis of
information/particulars declared/furnished

Signature of the Branch Manager/
Authorized Officer of the Branch

- Note
- a) At the bottom of each page, the applicant(s) must put his/their signature(s) and the Branch Manager/Authorized Officer of the Branch must also write "Examined/verified" and then put his signature
 - b) The applicant(s) may use separate sheets if the space in the application form is not sufficient to supply the required information / particulars and if they like to furnish further particular information
 - c) Attested true copies of valid certificates as referred at Sl. 1 (k),(l) and (m) to be enclosed with the application



ISLAMI BANK BANGLADESH LIMITED

..... BRANCH

APPRAISAL REPORT

BAI-MURABAHA/BAI-MUAJJAL/HIRE-PURCHASE /
MUDARABA/MUSHARAKA INVESTMENT

1. Name & Address of the Client :

(Individual/Firm/Company etc.)

2. Name, Father's/Husband's :

Name and Residential &
Permanent Address of the
Proprietor/Partners/Directors.

3. Particulars of the Investment :

a) Mode & Amount of Investment :

Mode	(Amount of Taka)		
	Existing limit, if any	Limit applied	Limit recommended by the Branch
i. Letter of Credit			
ii. Bai-Murabaha			
iii. Bai-Muajjal(TR)			
iv. Hire-Purchase			
v. Musharaka			
vi. Mudaraba			

b) Purpose of Investment :

c) Period of Investment :

Validity of the Limit

d) Agreed Profit/Rate of Return :

e) Total Sale Price :

f) Equity (For Musharaka) :

g) Profit sharing Ratio :

(in case of Musharaka)

h) Security

- i. Cash/Goods :
- ii. Primary :
- iii. Collateral with :
particulars & value
assessed by the Branch
(valuation certificate on
physical inspection duly
signed by the Manager &
officer to be enclosed)

4. Net-worth of Individual/Proprietorship/Partnership concern :

- a. Value of immovable property : Tk.
 - b. Investment in shares : Tk.
 - c. Investment in business : Tk.
 - d. Bank balance : Tk.
 - e. Other movable assets (statement to be enclosed) : Tk.
-
- Tk.

Less :

- a. Investment from our Bank : Tk.
 - b. Investment from other Bank : Tk.
 - c. Borrowing from other sources : Tk.
-

Total : Tk.

5. In case of Limited Company, audited Profit & Loss Account and Balance Sheets for the last three years are to be enclosed and ratio analysis as per latest Balance Sheet as follows:-

- a. Debt Equity Ratio :
- b. Total Indebtedness-Ratio :
- c. Current Ratio :
- d. Quick Ratio :
- e. Gross Profit Ratio :
- f. Net Profit Ratio :
- g. Expenses Ratio :
- h. Turnover of Inventory Ratio :
- i. Turnover of Debtors Ratio :
- j. Turnover of Creditors Ratio :
- k. Net Profit to Net worth Ratio :
- l. Debt Service Coverage Ratio :
- m. Net-worth :

6. Performance of last 3 (three) years or from the date the party is banking with the Branch. i.e., investment, import, export (separate sheet may be enclosed)

a. Mode of Investment : Murabaha/Bai-Muajjal

Date of Investment	Period	Amount of Investment	Mark up Profit	Due Date	Date of Adjustment
1	2	3	4	5	6

Amount of Profit realised	R.R. %	Rebate allowed, if any	Compensation recovered, if any	Sanctioning Authority	Remarks
7	8	9	10	11	12

b. Mode of Investment : Hire Purchase/HPSM :

Date of Investment	Period	Amount	Monthly Instalment (Principal)	Due Date	Amount Outstanding		
					Principal	Rent	Total
1	2	3	4	5	6	7	8

Amount Overdue			R.R. %	Rent Charged	Sanctioning Authority	Remarks
Principal	Rent	Total				
9	10	11	12	13	14	15

c. Mode of Investment : Murabaha L/C :

Date of Opening L/C	L/C No	Amount		% of Cash Security & Amount	Item	Date of Expiry	Commission realised	Date of Investment
		F.C.	B.D Tk.					
1	2	3	4	5	6	7	8	9

Amount of Investment	Mark up Profit	Due Date	Date of Adjustment	Profit realised	R.R. %	Rebate allowed	Compensation recovered	Sanctioning Authority	Remarks
10	11	12	13	14	15	16	17	18	19

d. Mode of Investment : Musharaka

Date of Investment	Period	Amount of Investment	Due Date	Date of Adjustment	Rate of Profit		Liquidated Damage, if any	Remarks
					Projected (%)	Realised (%)		

	Amount outstanding	Due Date	Remarks
Present Outstanding Liabilities with mode-wise break- up (showing regular & overdue, if any, separately)			

7. Name of their previous Bank(s) :
and particulars of liabilities.
if any, with them (mentioning
whether regular or stuck-up)
8. Report of their previous Bankers :
(copy to be enclosed)
9. Transaction of the party with :
the Branch
- i) Current A/c No. & :
Date of Opening
- ii) Transaction in Current A/c :
(Amt. in lac)
- a. Average balance : Tk.
- b. Present balance : Tk.
- iii) Turn-over (12 months) in :
Current A/C (Amount in lac)
- a. Total Credit : Tk.
No. of Entries
- b. Total Debit : Tk.
No. of Entries
- iv) Turn-over in Investment
Account during the Currency
of Existing limit/last 12 months
- a. Murabaha : Tk.
- b. Bai-Muajjal : Tk.
- c. Letter of Credit : Tk.
- d. Musharaka : Tk.
10. Profit earned by the Branch :
from this party during last
1(one) year.
11. Present outstanding liabilities with mode-wise break-up (showing regular & overdue,
if any, separately).

Mode	Outstanding	Due Date	Remarks

12. a. Observation on profitability
and marketability of the
goods and primary security.

b. Overall Risk from Risk
Analysis: Result
(Risk Analysis to be enclosed)

13. The undersigned have personally verified the following information about the
item(s)/goods under consideration and submit hereunder our point-wise
observation :

- | | | | | |
|------|--|---|------------------------------|-----------------------------|
| 13.1 | Whether the Business establishment
of the client physically verified. | : | ☐ YES | ☐ NO |
| 13.2 | i) Whether Honesty, Integrity and Business
dealings of the client ascertained from
business and important Personalities. | : | ☐ YES | ☐ NO |
| | ii) If yes, whether the report is satisfactory: | | ☐ YES | ☐ NO |
| 13.3 | Whether Confidential Report obtained : | | ☐ YES | ☐ NO |
| | from other Banks/Financial Institutions/
Other Branches of IBBL. | | | |
| 13.4 | Whether Report from Credit Information
Bureau (CIB) obtained | : | ☐ YES | ☐ NO |
| 13.5 | Whether the item(s)/goods Permissible
by Islamic Shariah: | | ☐ YES | ☐ NO |
| 13.6 | Whether the item(s)/goods restricted by
Bangladesh Bank | : | ☐ YES | ☐ NO |
| 13.7 | Whether the item(s)/goods permissible by Current
Investment Policy of the Bank | : | ☐ YES | ☐ NO |
| 13.8 | Whether item(s)/goods is/are readily saleable : | | ☐ YES | ☐ NO |

13.9	Whether the item(s)/goods has/have constant and effective market demand :	☐ YES	☐ NO
13.10	Whether the item(s)/goods is/are perishable: 1. In long-term durations :	☐ YES	☐ NO
	2. In short-term durations :	☐ YES	☐ NO
13.11	Whether the price of the item(s)/goods is subject to frequent and violent changes :	☐ YES	☐ NO
13.12	Whether the quality and other specifications of the item(s)/goods as desired by the client can be ensured:	☐ YES	☐ NO
13.13	Whether the item(s)/goods is/are available in the market: If available. i) Wholesale price Tk. per unit prevailing in the market. ii) Retail price Tk. per unit prevailing in the market. iii) What will be the quantity of daily, weekly, monthly sale ?	☐ YES	☐ NO
13.14	Whether the Bank is in a position to purchase the item(s) /goods in time and at negotiable price :	☐ YES	☐ NO
13.15	Whether the Investment under reference is within the manageable capacity of the Branch:	☐ YES	☐ NO
13.16	i) Whether the investment under reference is within the Manageable capacity of the client.	☐ YES	☐ NO
	ii) Justification for reply at 13.16(i)		
13.17	Whether Application on <u>F-136</u> in Triplicate obtained from the client:	☐ YES	☐ NO
13.18	Whether the attested photograph(s) of the Proprietor/Partners/Directors/Trustee(s) obtained and affixed on the top right hand corner of the application.	☐ YES	☐ NO

- 13.19 Whether all the columns of the Application (F-136) Form properly filled in: ☐ YES ☐ NO
- 13.20 Whether all the particulars and information contained in the Application (F-136) Form are complete and correct in all respects: ☐ YES ☐ NO
- 13.21 Whether all the required Documents/Papers as listed in the footnote of the Application (F-136) Form are obtained: ☐ YES ☐ NO
- 13.22 Whether the Application (F-136) Form signed (as per specimen signature with the Bank) by the client and duly verified by the authorised official of the Bank: ☐ YES ☐ NO
- 13.23 Whether the Application (F-136) has been entered in the "Investment Proposal Received and Disposal Register" (B-53) and a Serial Number has been allotted: ☐ YES ☐ NO
- 13.24 Whether declaration of the client about his liability (both Contingent and Real) with other Banks/Financial Institutions/Leasing Companies, including other Branches of IBBL obtained. ☐ YES ☐ NO
- 13.25 Whether Balance Sheet of the client for last three consecutive years obtained: ☐ YES ☐ NO
- 13.26 i) Whether land, Building(s), Other Assets and Properties proposed to be mortgaged or hypothecated have been inspected: ☐ YES ☐ NO
- ii) If yes, mention the name and designation of the officials who inspected.

Name

Designation

- 1.
- 2.
- 3.

iii) If yes, whether it is genuine and correct in cross references to Documents, Title Deeds and other relevant papers.

YES

NO

iv) Whether clean opinion on Documents, Title Deeds and other relevant papers has been obtained from approved lawyers.

YES

NO

v) Whether Market Value and Forced Sale Value of the proposed mortgaged properties have been studied carefully and recorded properly:

YES

NO

vi) If yes, mention the name and designation of the Officials who studied the market value and forced sale value:

Name

Designation

1.

2.

3.

13.27 i) Whether Sale Price of the goods has been worked-out as per guidelines:

YES

NO

ii) If yes, i) Whether it will be profitable to the client:

YES

NO

iii) Whether the client has the ability to pay the Sale Price to the bank in time:

YES

NO

13.28 General Remarks / Comments / Recommendations :

INVESTMENT OFFICER

SECOND OFFICE

SVP/VP/AVP/MANAGER

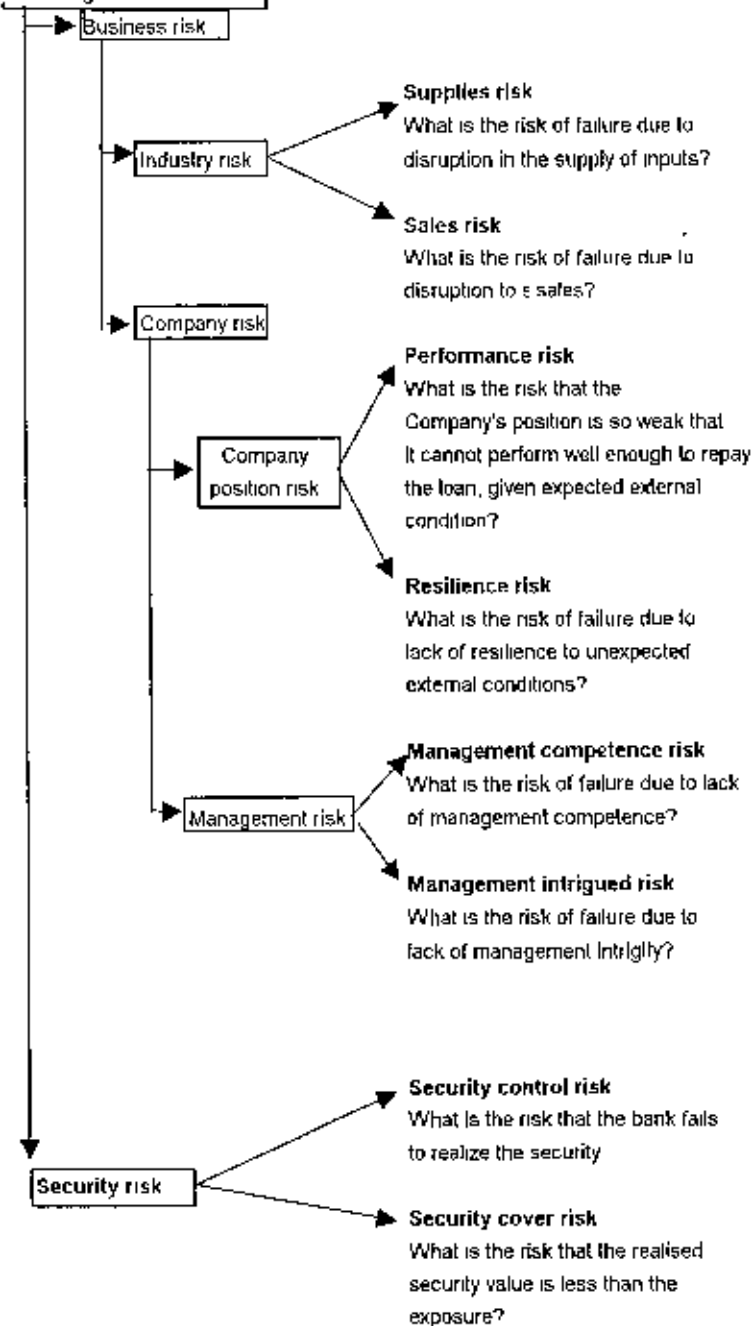
page 1

Company name		Industry name.	
Address:		Code	
Group name (If company is part of group) N/A		Originating office/branch	
Current Exposure to this customer Nil		Current Exposure to Group TK./US\$.. Nil	
Why was this analysis conducted?		Application for new facility ☐	Increase to existing facility ☐
		Renewal of existing facility ☐	Delinquent customer ☐
		With enhancement.	
Risk category	Good	Acceptable	Marginable
Business	☐	☐	☐
Security	☐	☐	☐
Overall	☐	☐	☐
Purpose		Type of facility sought	
		Term Loan ☐	
		☐	
		☐	
Loan Category		Amount Sought	
Voluntary given by bank ☐			
Part of Govt. scheme ☐ (name of the scheme)		Level of approval required	
Directed by Individual ☐ (name of person directing this loan)		Management ☐	
		Board of Directors ☐	
		Bangladesh Bank ☐	
		Date customer made request	
Originating officer	Recommendation Accept ☐ Decline ☐	Date analysis completed	
Recommending Officer(s)	☐ ☐ ☐ ☐ ☐	Date recommendation made	
Approving officer	Decision accept ☐ Decline ☐	Date decision made	
Officer authorising disbursement	Date disbursement authorised	Date loan disbursed	

Lending risk

When you have completed pages 3 to 15 of the loan analysis form, copy your answers to the questions into the grid below. Then write the score corresponding to each answer in the rightmost column, and total all the scores.

Lending risk



Risk level				Score
Low	Average	High	Excessive	
☐	☐	☐	☐	
15	3	4.5	12	
☐	☐	☐	☐	
15	3	4.5	12	
☐	☐	☐	☐	
2	4	6	16	
☐	☐	☐	☐	
2	4	6	16	
☐	☐	☐	☐	
3	6	9	24	
☐	☐	☐	☐	
3	6	18	34	
Total Business Risk Score				
☐	☐	☐	☐	
-10	-5	+5	+10	
☐	☐	☐	☐	
-10	-5	+5	+10	
Total Security Risk Score				

Select Overall Risk From Matrix

1	2	3	4
A	A	A	A
B	B	B	B
C	C	C	C
D	D	D	D
GOOD	ACCEPTABLE	MARGINAL	POOR

Good Risk				Acceptable Risk				Marginal Risk				Poor Risk			
13~19				20~26				27~34				over 34			
Business Risk				1				2				3			
Security Risk				A				B				C			

(-2%) (-15%) (-14%) ~0 0 ~10 over 10

X

Supplies risk

page 3

Cost item	% of total costs	What is the risk of disruption			Comments
		Better than average	Average	Worse than average	
Labour		☐	☐	☐	
		☐	☐	☐	
		☐	☐	☐	
Raw materials		☐	☐	☐	
		☐	☐	☐	
accessories		☐	☐	☐	
		☐	☐	☐	
others		☐	☐	☐	
equipments		☐	☐	☐	
power		☐	☐	☐	
premises		☐	☐	☐	
others		☐	☐	☐	
		☐	☐	☐	
		☐	☐	☐	
		☐	☐	☐	
Number of days production lost in past 12 months due to strikes ? Independent power supply ☐ Dependent on public utilities ☐ Power supply ☐ Explain any significant risk of disruption to production Following catalysts may hamper production-----					
What is the risk of failure due to disruption in the supply of inputs ? Low ☐ Average ☐ High ☐ Excessive ☐ (tick one box)					

Industry growth

Give industry size figures for the latest 3 years that are available

(IN MILLION USD)

Year			
Estimated total industry turnover			

Strong growth

Weak growth

No change

Small decline

Large decline

Over the next few years,What is the most likely trend in industry turnover ?

☐

☐

☐

☐

☐

Support your answer.

Competitive pressure:

Obtain performance data for two major competitors

Major competitor

Data not available.

Market share

%

(name)

Performance

Year			
Turnover			
Profit			

This competitor is growing

less fast

about the same

faster

☐

☐

☐

What prevents customers from switching to this competitor ?

Major competitor 2

Data not available.

Market share

%

(name)

Performance

Year			
Turnover			
Profit			

This competitor is growing

less fast

about the same

faster

☐

☐

☐

What prevents customers from switching to this competitor ?

Barriers to entry

Difficult

Average

Easy

How easy it for new competitors to enter this industry ?

☐☐☐

What barriers prevent new competitors from entering this industry ?

Regulatory changes

Low

Average

High

What is the risk that changes in regulations will damage sales ?

☐☐☐

Explain your answer

Customer concentration: List 5 largest customers

Customer name	% of total sales

What is the risk that a single customer representing a significant proportion of sales, switches to a competitor ?

Low

Average

High

☐☐☐

What is the risk of failure due to disruption of sales ?

Low

Average

High

Excessive

☐☐☐☐

(tick one box)

Performance risk

page 6

Recent performance history

Yes

No

☐
☐

Are financial spreadsheets attached ?

Audited
accounts

Unaudited
accounts

Bank
estimates

Management
estimates

Other (explain)

How did you obtain the financial data ?

☐
☐
☐
☐

Give most recent 3 years performance data

(In thousand Tk.)

Year			
Sales			
Net worth			
Profits			

Explain the significance of any important trends you notice in the performance data.

Competitive position

What is the company's rank in industry (in terms of turnover) ?..... Rank is not available.

Compare figures with other companies in the industry (and/or with industry averages) , and explain the significance of any important difference you notice

What are the strengths and weaknesses of this company, in comparison to its competitors ?

strengths

weaknesses

Strategy

How does the company differentiate itself from its competitors ?

Quality

better than
competitors

☐

indistinguishable
from competitors

☐

worse than
competitors

☐

Price

cheaper than
competitors

☐

about the same
as competitors

☐

more expensive
than competitors

☐

What strategy will this company adopt to exploit its strengths and overcome its weaknesses ?

How confident are you that this strategy will work ?

high confidence
in strategy

☐

average

☐

low confidence
in strategy

☐

Explain your answer

Cash flow forecasts

Do the cash flow forecasts indicate that the company will generate sufficient cash to repay its loans ?

significantly
more than
enough cash

☐

enough cash

☐

not enough
cash

☐

How confident are you that the company will perform as forecasts in the cash flows ?

high confidence

☐

average

☐

low confidence

☐

Explain your answer

What is the risk that the company's position is so weak that it cannot perform well enough to repay the loan , given expected external conditions ?

Low

☐

Average

☐

High

☐

Excessive

☐

(tick one box)

Resilience risk (continued)**Liquidity(continued)**

What proportion of costs is fixed ?

very easily average with difficult

How easily will this company be able to reduce costs if sales fall?

☐ ☐ ☐

Explain your answer.

How resilient is the company to illiquidity (which may cause repayment failure) ?

highly
resilient average not at all
resilient
☐ ☐ ☐**Connections**

Do the owners or managers have any connections / affiliations which may benefit or damage the company ?

How resilient is the company to the adverse effects of political changes ?

highly
resilient average not at all
resilient
☐ ☐ ☐**Resilience risk***Copy your assessments of resilience to bankruptcy, illiquidity and the adverse effects of political changes, from above*

How resilient is the company to bankruptcy ?

How resilient is the company to illiquidity ?

How resilient is the company to the adverse effects of political changes ?

highly resilient (low risk)	average	not at all resilient (high risk)
☐	☐	☐
☐	☐	☐
☐	☐	☐

*Now, use your assessment of resilience to bankruptcy, illiquidity and the adverse effects of political changes, to answer the following question***What is the risk of failure due to lack of resilience to unexpected external conditions ?**

Low	Average	High	Excessive
☐	☐	☐	☐

(tick one box)

Management ability

page 10

List all owners holding more than 20% of equity
Name shareholding(%)

List board members

What is your assessment of the ability of these people to ensure that this company succeeds ?

Better than
average

Average

Worse than
average

☐
☐
☐

Give reasons for your assessment

Who is the primary decision maker on financial issues ?

Yes

No

(name)

Is this person's biodata attached ?

☐
☐

What is your assessment of this person's ability to manage the finances of this company ?

Better than
average

Average

Worse than
average

☐
☐
☐

Who has primary responsibility for operations issues ?

Yes

No

(name)

Is this person's biodata attached ?

☐
☐

What is your assessment of this person's ability to manage the operations of this company ?

Better than
average

Average

Worse than
average

☐
☐
☐

Give reasons for your assessment

Comment on strengths and weakness of any other key personnel

Name	Responsibility	Strengths	Weakness

What is the risk that the business fails due to lack of management ability ?

Low

Average

High

Excessive

☐
☐
☐
☐

(tick one box)

Level of managerial teamwork

Comment on any deficiencies you observe in the organisation chart

Have any key managers/personnel changed in the last 12 months ? Yes No
☐ ☐

Why ?

How well does the management team work with the owner(s)/board ? Very well Average Regular conflict
☐ ☐ ☐

How thoroughly does the management team analysis issues before taking important decisions ? Very thorough analysis supporting all important decisions Average level of analysis Poor analysis. "Seat of the pants" decision making
☐ ☐ ☐

Are the management team prepared to take difficult decisions ? (e.g. cost cutting, staff reductions) Take difficult decisions readily Take difficult decisions reluctantly Avoid or delay difficult decisions
☐ ☐ ☐

What is the risk that the business fails due to lack of managerial teamwork ? Low Average High Excessive
☐ ☐ ☐ ☐
(tick one box)

Management competence risk

Copy your assessments of managerial ability and level of teamwork from above.

What is the risk that the business fails due to lack of management ability ? Low Average High Excessive
☐ ☐ ☐ ☐

What is the risk that the business fails due to lack of managerial teamwork ? Low Average High Excessive
☐ ☐ ☐ ☐

Now use your assessment of managerial ability and level of teamwork to answer the following question

What is the risk that the business fails due to lack of management competence ? Low Average High Excessive
☐ ☐ ☐ ☐
(tick one box)

Management honesty

Who are the auditors ?

How long have they acted
as auditors to this company ?

If the auditors have changed in the last 3 years, answer the following questions:

Who were the previous auditors ?

How long did they
hold this position ?

Why did the company change auditors ?

Do we have any information that this customer has ever misrepresented itself
either to this bank or to other banks ?

Yes No
☐ ☐

If you answered yes to the previous question, give details.

How reliable do you believe to be the information supplied by this company ?

More reliable than average Average Less reliable than average
☐ ☐ ☐

Give reasons for your assessment

Management dependability

How long has this customer banked with us ?

Years (Since the period of incorporation)

What is the risk that the company avoids its obligations to the
bank by diverting funds to associated companies ?

Low Average High
☐ ☐ ☐

Explain your answer :

How dependable will the management be in meeting their commitments ?

More dependable than average Average Less dependable than average
☐ ☐ ☐

Explain your answer.

What is the risk of failure due to lack of
management integrity ?

Low Average High Excessive
☐ ☐ ☐ ☐

(tick one box)

Ease of obtaining a favorable judgment

Security documents last checked on

by

(date)

What is the level of perfection of the security documents ?

Is the account subject of an inspection exception

Yes ☐No ☐

Support your answer

What is risk that the bank fails to obtain a favorable

judgment ?

☐

Confident of

favorable

.....

☐

Some risk o

unfavorable

.....

☐

Significant risk

of unfavorable

.....

Support your answer

Ease of taking possession of security

Last site visit made on

by

(date)

Is the site visit report attached ?

Yes ☐No ☐

What is the risk that the bank fails to take possession of the security ?

☐

Confident of

taking

.....

☐

Some risk

failure to take

.....

☐

Significant risk

of failure to take

.....

(name)

Support your answer

What is the risk that the b

☐

(no realisation

complications)

Low

☐

(potential

complications)

Average

☐

(realisation

complete

High

☐

(realisation

impaired)

Excessive

(tick one box)

Speed of liquidation

How long will it take to liquidate the security ?

(The time(s) given here should be used in calculating security cover on next page)

What potential problems may delay liquidation ?

lower complexity of

What is the risk that the liquidation process takes longer than the estimate given ?

Low

Average

High

☐☐☐**Liquidation value**

Assessed liquidation value

Taka

01) Hypothecation of stocks/ finished goods-----

Lac

02) Hypothecation of garments machineries -----

Lac

Who assessed the liquidation value ?

(name of person)

(company)

How do you expect this value to change by the time that the security is realised ?

What do you estimate will be the value of the security at liquidation ?

TK Lac

(Assuming depreciation charge @ 10% per annum)

What costs will the bank have to bear in liquidating this security ?

(e.g. Legal fees, auction commission etc)

How much do you expect the bank to realise from this security ?

(= liquidation value less costs of liquidation)

TK Lac

(This number should be used in calculating security cover on the next page.)

Low

Average

High

☐☐☐

What is the risk that the value actually realised is less than your estimate ?

Security cover risk (continued)

Expected security cover strength

(in lac TK.)

	Primary security	Collateral	Other Security	Totals
a) Type of security	Hypo of raw materials	Hypo of Machineries		
b) Expected realisable value at liquidation				
c) Expected time taken to liquidate this security (years)				
d) Discount rate % (1 year fixed deposit rate)				
e) Discount factor % $= \left(\frac{100 \times 1}{1 + d/100} \right)$ (Discount factors are listed in a separate table)				
f) Present value of security (=bxex/100)				
g) Current exposure (Principle + interest)				
h) Security cover % (=100x1/g)				

How strong is security cover,
based on expected speed of liquidation
and liquidation value ?

Strong (above 100%)	Average (in range 75 -100%)	Weak (below 75%)
☐	☐	☐

Now copy from the previous page your assessments
of the risk that the actual speed of liquidation is
longer than expected and actual liquidation value
is lower than expected.

What is the risk that the liquidation process takes
longer than the estimate given ?

Low	Average	High
☐	☐	☐

What is the risk that value actually realised is less
than your estimate ?

Low	Average	High
☐	☐	☐

Use the three assessments above to answer the following question

What is the risk that the realised security value is less
than the exposure ?

Low	Average	High	Excessive
☐	☐	☐	☐

(tick one box)

Data collection check list

Documents / items required for lending risk analysis	Required ?		Obtained ?	
	Yes	No	Yes	No
Company accounts for at least 3 years	☐	☐	☐	☐
Bank statements for prior r 12 months from previous bank (for new customer)	☐	☐	☐	☐
Set of accounts for at least two competitors (if published)	☐	☐	☐	☐
Industry average figures (if available)	☐	☐	☐	☐
Cash flow forecasts (required for : term loans - forecasts should uild be for duration of loan new overdrafts / facilities - forecast should be for 12 months Not required if renewing an overdraft/ facility)	☐	☐	☐	☐
Financial spreadsheets	☐	☐	☐	☐
Customer account statistics form	☐	☐	☐	☐
Credit Bureau Report	☐	☐	☐	☐
Organisation Chart	☐	☐	☐	☐
Biodata for, - All directors - Other key Executive - Head of operations	☐	☐	☐	☐
Copies of all report one site visits made during the last 12 months.	☐	☐	☐	☐
Valuations o: of securities offered	☐	☐	☐	☐
Memorandum / articles of association / certificate of corporation	☐	☐	☐	☐
Business plan (required for start up company)	☐	☐	☐	☐
Receiving Ageing	☐	☐	☐	☐
Stock / Inventory Report	☐	☐	☐	☐
Trade Licence	☐	☐	☐	☐
Tax Clearance	☐	☐	☐	☐

Pending item checklist

List below any pending items requiring action on this loan application

Item	Responsibility	Due date	Status

Customer site visit report form

Company name		Date of Visit
Site visited		Date of last visit
People visited	Bank officers making visit	
Total facilities	Current outstanding	

Visit objectives and data to be collected (to be completed before visit)

Results

Follow up and action steps.

Any risk components rated high or excessive should be addressed with management and the results noted above.

