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AN INQUIRY INTO THE CAUSES OF
SICKNESS IN SOME SELECTED
INDUSTRIAL UNITS IN BANGLADESH -
A BALANCE SHEET APPROACH

MIR NAZMUL KARIM

Dissertation submitted to the Department of Accounting,
University of Dhaka, Bangladesh for the Degree of
Doctor of Philosophy in Accounting

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Professor Md. Habibullah

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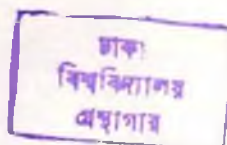
October, 1992.

Preface

The present study is the outcome of academic exercise on the part of the researcher appertaining to the problem of Industrial Sickness in Bangladesh and its underlying causes. The problem was chosen in view of growing concern expressed by the planners and policy-makers regarding the ailing condition of the industrial units belonging to both the public and private sectors. The tools used comprised accounting ratio analysis, desk research and field investigation with the help of a pre-designed questionnaire. The cost of the study was met by the researcher from his own personal saving along with a small research token grant from the University Grants Commission.

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The finding is that Industrial Sickness is the result of both internal and external causes. The style and quality of management played a crucial role. It was also found that calculation and analysis of accounting ratios on a regular basis could have predicted emerging sickness and thus enabled the management of the enterprise in adopting timely remedial measures.



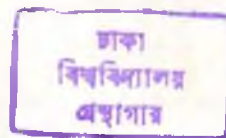
I am deeply grateful to Dr. Md. Habibullah, Professor of Accounting, University of Dhaka for the guidance and encouragement althrough. I am also grateful to the concerned executives of Bangladesh Shilpa Bank (BSB); Bangladesh Shilpa Rin Sangstha (BSRS); Bangladesh Krishi Bank (BKB); Bangladesh Small and Cottage Industries Corporation (BSCIC); Metropolitan Chambers of Commerce and Industry; Bangladesh Drug Manufacturers

Association; Bangladesh Cold Storage Owner's Association, Ministry of Industries and Department of Textiles of Government of Bangladesh (GOB) for their valuable help. My sincere thanks are also due to the President of the Institute of Chartered Accountants of Bangladesh (ICAB); Secretary of the Institute of Cost and Management Accountants of Bangladesh (ICMAB); Secretary of Dhaka Stock Exchange Ltd. and Owners of the sample industrial enterprises for their generous help.

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Finally, I would like to put on record the positive attitude of my wife Raonak Akhter who was gracious enough to spare me from the management of family affairs and thereby facilitated my concentration towards the study.

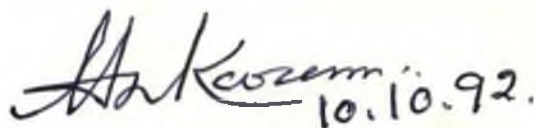
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(MIR NAZHUL KARIM)

DECLARATION

I declare that the Dissertation entitled "An Inquiry into the Causes of Sickness in Some Selected Industrial Units of Bangladesh - A Balance Sheet Approach" submitted to the Department of Accounting, University of Dhaka, Bangladesh for the Degree of Doctor of Philosophy in Accounting is entirely an original and new work completed by me under the supervision of Dr. Md. Habibullah. I further affirm that no part or whole of the study in any form has been submitted to any other University or Institute for Degree or Diploma.



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C E R T I F I C A T E

I certify that Mr. Mir Nazmul Karim did the work in Dhaka University under my direct supervision. He complied with all the formalities. The thesis is ready for submission for evaluation.

Md. Habibullah

Date Oct 10, 1992

(Dr. Md. Habibullah)

TABLE OF CONTENTS

	Page Nos
PREFACE	i
DECLARATION	iii
CERTIFICATE	iv
TABLES OF CONTENTS	v
LIST OF TABLES	x
LIST OF DIAGRAMS	xii
LIST OF APPENDIX	xiii
LIST OF ABBREVIATIONS	xiv
ABSTRACT	xvii

Chapter - I**Phenomenon of Industrial Sickness and the
Bangladesh Perspective**

1.1 Introduction	1
1.2 Statement of the Problem	3
1.3 Objectives of the Study	8
1.4 Hypotheses of the study	9
1.5 Importance of the study	10
1.6 Coverage of the study	11
1.7 Limitation of the study	12
1.8 Scheme of the study	13

Chapter - II

Literature Survey on Industrial Sickness or Corporate Failure

2.1	Introduction	15
2.2	Definition of Industrial Sickness	16
2.3	Causes of Industrial Sickness	23
2.4	Symptoms of Industrial Sickness	29
2.5	Identifications of Industrial Sickness	32
2.6	Review of Research Work Carried out in the Field of Industrial Sickness or Corporate Failure	35
2.7	Some Theoretical Aspects of Financial Statement and its Role in Diagnosing Industrial Sickness	43
2.8	Inadequacies of the Financial Statements Prepared by Companies Operating in Bangladesh	50
2.9	Selection of Ratios for the Study	53
2.10	Bangladesh Scenario	56
2.8	Chapter Summary	57

Chapter - III

Methodology

3.1	Introduction	59
3.2	Time Period Covered by the Study	61
3.3	Population of the Study	61
3.4	Selection of Sample and Sample size	64
3.5	Selection of Sick and Non-sick Companies	67
3.6	Mode of Data Analysis	73
3.7	Final Comment About Methodology	77

Chapter - IV

Industrial Environment in Bangladesh and its Impact on
the Industrial Enterprises

4.1	Introduction	84
4.2	Environment of an Industrial Organisation	85
4.3	System Concept and the Industrial Organisation	89
4.4	Life Cycle of an Industrial Organisation	91
4.5	Environmental Factors and its Impact on Sample Units	94
4.6	External Environmental Factors	95
4.7	Internal Environment Factors	113
	(a) Management Function and Organisation	114
	(b) Finance	118
	(c) Production	123
	(d) Marketing	125
	(e) Personal	126
4.8	Chapter Summary	129

Chapter - V

Analysis and Interpretation of Collected Accounting Data

5.1	Introduction	131
5.2	Analysis of Vital Financial Statement Data	133

Income Statement

(a)	Gross Profit	135
(b)	Earning Before Interest and Taxes (EBIT)	139
(c)	Earning After Interest and Texas (EAIT)	139

(d) Retained Earning	140
<u>Balance Sheet</u>	
(a) Working Capital	140
(b) Net Worth	141
5.3 Evaluation of Financial Accounting Practices	141
<u>Accounting Principle Disclosure</u>	
(a) Stock Valuation Method	146
(b) Assets Value Appreciation	148
(c) Qualified Audit Report	149
<u>Preparation of Accounts</u>	
(a) Accounting Staff	150
(b) Misleading Accounting Practice	155
<u>Financial Policy</u>	
(a) Geared Capital	156
(b) Dividend Policy	159
(c) Depreciation Policy	163
5.4 Results of Ratio Analysis	169
5.5 Analysis of Non-Financial Information	180
5.6 Expert Opinion Survey	183
5.7 Chapter Summary	186

Chapter - VI

Summary and Finding of the Study

6.1	The Problem	194
6.2	Summary of the Study	196
6.3	Hypothesis Analysis	199
6.4	Conclusion and suggestion	205
	APPENDICES	210
	BIBLIOGRAPHY	235

List of Tables

TABLE 2.2: SUMMARY OF ACCOUNTING RATIOS USED BY RESEARCHERS	54
TABLE 3.1: POPULATION OF THE STUDY	64
TABLE 3.2: SAMPLE SIZE & ITS DISTRIBUTION BETWEEN GROUP A & GROUP B COMPANIES	66
TABLE 3.3: PROFILE OF SAMPLE INDUSTRIAL UNITS	72
TABLE 3.4: LOCATION OF THE SAMPLE INDUSTRIAL UNITS	73
TABLE 3.5: SUMMARY OF RESULTS DERIVED FROM THE SURVEY	78
TABLE 3.6: LIST OF SELECTED INDUSTRIAL UNITS COVERED BY THE STUDY	71
TABLE 4.1: VALUE OF MAJOR FOREIGN CURRENCY AGAINST BANGLADESH CURRENCY	103
TABLE 4.2: CAPITAL STRUCTURE & LEADING SYMPTOMS	121
TABLE 5.1: IMPORTANT ACCOUNTING VARIABLES & THE POSITION OF THE SAMPLE UNITS	134
TABLE 5.2: STATUS OF THE SAMPLE COMPANIES AGAINST SELECTED ACCOUNTING CRITRIA	142
TABLE 5.3: EMPLOYMENT OF QUALIFID ACCOUNTING STAFF IN THE SAMPLE COMPANIES	151
TABLE 5.4: USE OF FULL-TIME ACCOUNTING STAFF IN THE SAMPLE COMPANIES	154
TABLE 5.5: USE OF GEARED CAPITAL BY THE SAMPLE COMPANIES	158
TABLE 5.6: POSITION OF THE SAMPLE COMPANIES IN RESPECT OF DECLERATION OF DIVIDEND	162
TABLE 5.7: DIVIDEND DECLARATION POSITION OF TWO SAMPLE COMPANIES	162
TABLE 5.8: EFFECT OF DEPRECIATION DEDUCTION	166
TABLE 5.9: TAX ADJUSTMENTS REQUIRED IN A CAPITAL BUDGETING DECISIONS	167
TABLE 5.10: TURNOVER RATIOS (GROUP A)	170
TABLE 5.11: PROFITABILITY RATIO "	171
TABLE 5.12: LIQUIDITY RATIOS "	171
TABLE 5.13: CAPITAL GEARING RATIO "	172
TABLE 5.14: FINANCIAL LEVERAGE RATIO "	172

TABLE 5.15: TURNOVER RATIOS	(GROUP B)	173
TABLE 5.16: PROFITABILITY RATIOS	"	174
TABLE 5.17: LIQUIDITY RATIO	"	175
TABLE 5.18: CAPITAL GEARING RATIO	"	176
TABLE 5.19: FINANCIAL LEVERAGE RATIO	"	177
TABLE 5.20: RESULTS OF ALTMAN & TAFFLER Z-SCORE		178
TABLE 5.21: AGE OF THE COMPANY		180
TABLE 5.23: NO. OF CURRENT DIRECTORS		180
TABLE 5.24: ENTRY & EXIT OF DIRECTORS		181
TABLE 5.25: NO. OF NON-DIRECTOR SHAREHOLDERS		181
TABLE 5.26: NON-FINANCIAL INFORMATION		182
TABLE 5.28: ACCOUNTING VARIABLE : GROSS PROFIT		188
TABLE 5.29: ACCOUNTING VARIABLES EBIT		189
TABLE 5.30: ACCOUNTING VARIABLE EAIT		190
TABLE 5.31: ACCOUNTING VARIABLE : RETAINED EARNING		191
TABLE 5.32: ACCOUNTING VARIABLE : WORKING CAPITAL		192
TABLE 5.33: ACCOUNTING VARIABLE : SHAREHOLDERS NET WORTH		193

List of Diagrams

DIAGRAM 2.1: ORGANIC PROCESS OF INDUSTRIAL SICKNESS	25
DIAGRAM 4.1: THE FIRM AS AN INTERMEDIARY	
DIAGRAM 4.2: FLOW OF CAPITAL INTO THE BUSINESS	
DIAGRAM 4.3: CIRCUIT FLOW OF FUNDS IN BUSINESS	
DIAGRAM 4.4: LIFE CYCLE OF AN INDUSTRIAL ORGANISATION	
DIAGRAM 4.5: ANATOMY OF AN INDUSTRIAL UNIT	
DIAGRAM 4.6: THE ENVIRONMENTAL ASPECTS OF AN INDUSTRIAL ORGANISATION	114
DIAGRAM 4.7: MANUFACTURING AS AN INPUT-OUTPUT SYSTEM	124

List of Appendix

APPENDIX - A: RECOMMENDATION LETTER FROM SUPERVISOR	210(A)
APPENDIX - B & C: INTRODUCTORY LETTER FROM THE CANDIDATE	210
APPENDIX - D: PILOT SURVEY QUESTIONNAIRE	211
APPENDIX - E: QUESTIONNAIRE FOR LICITING OPINION OF OWNERS	214
APPENDIX - F: NON-FINANCIAL INFORMATION ✓	218
APPENDIX - G: CAPACITY UTILISATION AND PRODUCTIVITY	220
APPENDIX - H: TARGET AND OUTPUT OF MAJOR PRODUCTS	221
APPENDIX - I: OUTSTANDING LOANS & ADVANCES OF BSB	222
APPENDIX - J: OVERDUES BY INDUSTRIAL SECTOR OF BSB	223
APPENDIX - K: COST STATEMENT	224
APPENDIX - L: INCOME STATEMENT	225
APPENDIX - M: BALANCE SHEET	226
APPENDIX - N: LIST OF ACCOUNTING VARIABLES	228
APPENDIX - O: NOTE ON CLASSIFICATION ERROR	229
APPENDIX - P: DETAILS OF FINANCIAL RATIOS	230

List of Abbreviations

GDP	: Gross Domestic Product
GOB	: Government of Bangladesh
BOI	: Board of Investment
BSB	: Bangladesh Shilpa Bank
BSRS	: Bangladesh Shilpa Rin Sangstha
BKB	: Bangladesh Krishi Bank
BSCIC	: Bangladesh Small and Cottage Industries Corporation.
NCB	: Nationalised Commercial Bank
ROI	: Return on Investment
GP	: Gross Profit
NP	: Net Profit
EBIT	: Earning Before Interest and Taxes
IDBP	: Industrial Development Bank of Pakistan
PICIC	: Pakistan Industrial Credit and Investment Corporation
RBI	: Reserve Bank of India
NCAER	: National Council for Applied Economic Research
ICICI	: Industrial Credit and Investment Corporation of India.
BIDS	: Bangladesh Institute of Development Studies
BIBM	: Bangladesh Institute of Bank Management
MICCI	: Metropolitan Chambers of Commerce and Industry
BCCI	: Bangladesh Chambers of Commerce and ndustry
BCIC	: Bangladesh Chemical Industries Corporation
ICB	: Investment Corporation of Bangladesh
BB	: Bangladesh Bank
UNIDO	: United Nationas Industrial Development Organisation
WB	: World Bank
IMF	: International Monetary Fund
MDA	: Multiple Discriminant Analyses
EPS	: Earning Per Share

PER : Price Earning Ratio
DFL : Degree of Financial Leverage
BEA : Bangladesh Economic Assocoation
ADB : Asian Development Bank
ICMAB: Institute of Cost and Management, Association of Bangladesh
ICAB : Institute of Chartered Accountants of Bangladesh
SICA : Sick Industrial Companies (Special Provisions), Act. 1985
SAFA : South Asian Federation of Accountants
DSE : Dhaka Stock Exchange
CA : Current Assets
CL : Current Liabilities
TA : Total Assets
TL : Total Liabilities
CF : Cash Flow
BS : Balance Sheet
DA : Defensive Assets
LTD : Long-term Debt
QA : Quick Assets
NW : Net Worth
NWC : Net Working Capital
R&D : Research and Development
TCE : Total Capital Employed
TD : Total Debt
ROTCE: Return on Total Capital Employed
NOP : Net Operating Profit
EAIT : Earning After Interest and Taxes
ADFIAP: Association of Development Financial Institution of Asia
and Pacific
FS : Financial Statement
IBA : Institute of Business Administration

BER : Bureau of Economic Research
IASB : International Accounting Standard Board
GAAP : Generally Accepted Accounting Principles
CPA : Certified Public Accountant
FASB : Federation of Accounting, Standard Board
TOE : Total Operating Expenditure
NS : Net Sales
NCIR : No Credit Interval Ratio
SE : Shareholders Equity
CGS : Cost of Goods Sold
NPM : Net Profit Margin
IM : Investment Margin
OD : Overdraft
AIE : Annual Interest Expenses
MPS : Market Price per Share
OCF : Operating Cash Flow
BCSA : Bangladesh Cold Storage Association
BDMA : Bangladesh Drug Manufacturers Association
MRP : Maximum Retail Price
LDC : Less Developed Country
LTD : Limited
Mfg. : Manufacturing
REVE : Reserve
PREF : Preference
COMN : Common
MS : Marketable Securities
AC.REC.: Accounts Receivable
NOS. : Numbers
FA : Fixed Assets
LA : Liquid Assets

A B S T R A C T

The present study deals with the problem of Industrial Sickness in Bangladesh. It is causing a lot of pressure on the fragile economy of Bangladesh which is characterised by large population size, rising unemployment rate, low rate of savings, low per capita income (US \$ 180), and a large primary sector which is vulnerable to natural calamities like flood, cyclone, tidal bore etc. The overall contribution of the industrial sector to the country's annual Gross Domestic Product (GDP) has remained static around 10 percent despite heavy promotional effect by the Government and Development Financial Institution (DFI's).

Immediately after independence of Bangladesh, the ruling Government adopted Socialism as the state policy and brought all the major industrial undertakings under Public Sector. Before this programme could make any headway, a new Government came to power in 1975 which adopted a policy of the privatising the industrial units. By the year 1982, the same policy was further geared up and the private sector was provided with liberal credit facilities and policy prescriptions through New Industrial Policy (NIP) and Revised Industrial Policy (RIP).

Unlike western countries, industrialisation programme in Bangladesh was mainly initiated by Government agencies and the DFI's were asked to implement the policy of the state. This was done with the expectation that the industrial sector would grow properly and create room for recovery of the money invested with minimum of failure. Between the year 1972-85, Bangladesh

Shilpa Bank (BSB) disbursed project loan to the tune of Tk. 2,791.2 million to the intending entrepreneurs for setting up industry. But the ambitious lending programme faced a serious debacle as a result of low rate of recovery and corresponding increase in the volume of outstanding loan and number of sick industrial units. It may be added here that the volume of outstanding loan shoot upto Tk. 22,000 crores in 1991. A Board of Investment (BOI) report puts the number of sick industrial units in the country at 1500 upto 31.10.91.

A local Consulting firm found that 70-80 percent of the industrial units are sick belonging to the sectors like Textiles, Food, Chemicals and Pharmaceuticals, Electrical Goods, Paper and Paper Products and Cold Storage. It may be further added here that 67 percent of the project loan disbursed by BSB are lying blocked in the aforesaid industrial sectors.

An industrial unit may be termed as sick which is incurring heavy losses, defaulting on loan repayment to the banks and DFI's and whose affairs are in a moribund state. This also implies that the company is unable to meet its financial obligation in due time and Net Worth has reduced by 50 percent or more. The various stages of sickness is often termed as Business Failure, Corporate Failure, Insolvency, Technical Insolvency etc. The term 'Business Failure' denotes to those cases of liquidation of business which is incapable of prosecuting its normal business affairs. This failure is again divided into two namely Economic Failure and Financial Failure. Economic Failure is one where a firm's resources do not cover cost including Cost of Capital (minimum rate of return) and fails to generate reasonable Return on

Investment (ROI). Financial Failure is the combination of economic failure i.e., achieving a rate of return adjusted for risks becomes significantly lower than the prevailing rate of return and legal failure i.e., insolvency. Again a firm may be regarded as Technically Insolvent where it is incapable of meeting its financial obligation since its Current Assets have exceeded Current Liabilities. It implies illiquidity and may be of a temporary nature.

In the ultimate analysis, an industrial unit may be termed as sick (in economic sense of the term failure) where it is unable to pay back its loan to the banks and DFI's and declare reasonable rate of dividend and share price registers a fall (sick in business sense of the term failure). The researchers have found that an industrial organisation may become sick under the influence of internal and external causes. Again it may be born sick, made sick and sickness may be thrust upon it. This study tried to explore whether these causes were really responsible for the sickness and whether the management could have predicted the same through calculation and analysis of financial ratios.

For the purpose of testing of hypotheses, focus was placed on the sick industries financed by BSB and attempted to find out the cases of sickness through analysis of Financial Statement (Trading Account, Profit and Loss Account and Balance Sheet data). Accordingly, necessary data regarding 24 industrial units from the aforesaid industrial sectors were collected after through analysis of the Long Form Audit Report for the year 1985 and 1986 and Quarterly Report on Sick/Problem Projects prepared by End Use Department of BSB. This data was collected for a period

of five years (1984-88) and minimum period was three years.

Then the collected accounting data was thoroughly scrutinised for extracting 26 accounting variables which was inturn used for calculating 24 accounting ratios. From the literature survey, it was fund that ratio analysis was a tested tool of predicting impending industrial sickness. These accounting ratios were then divided into five categories namely Turnover, Liquidity, Profitability, Capital Gearing and Financial Leverage. The ratio analysis was carried out under two phases namely Univariate Approach (considered each ratio separately) and Multivariate Approach (Accounting Models). Besides ratio analysis, some additional non-financial information were also incorporated in the research methodology. Since management inefficiency accounted for 70-80 peront of the causes of sickness, a questionnaire was designed and administered among the Chief Exceutives of the sample companies to measure their managerial performance.

The results of the ratio analysis (Univariate Approach) showed that the sample industrial units were sick since they were low, declining or negative. The results of the Altman's Z-score and Taffler's Z-score (Multivariate Approach) also confirmed our earlier finding that the industrial units were sick since the scores fell below the cut-off points of 2.675 and -1.95. An analysis of the non-financial information showed that all the units had a heavy debt burden and the accounts preparation was neglected which gave rise to unusual Audit Lag and Submission Lag. The sample units also showed signs of management inefficiency and did not care to improve their performance. They

also made no sincere and deliberate effort to protect their units from sickness by calculating the accounting ratios regularly.

In fact they preferred to drift away as a victim of fate rather than its master and were more inclined to use the same as a pretext for obtaining loan remission, fresh loan etc. from Government. The researchers and academicians were of the view that the prevailing economic indiscipline and callous attitude on the part of the entrepreneurs were mainly responsible for Industrial Sickness in Bangladesh. The study further revealed that the industries in Bangladesh are becoming sick due to management inefficiency, poor feasibility study, wrong financial planning, lack of reliable accounting information system and neglect of accounting tools (ratio analysis) in making management decision (Internal causes). Under external group of causes of sickness, we can mention high customs and excise duty, high cost of raw material, power, fuel and other inputs, inefficient and costly transport and communication system. Maximum Retail Price (MRP) regulations, frequent pay and wage hike, poor law and order situation, massive devaluation in Bangladesh currency and rampant import/smuggling of locally produced competing products.

It was found in course of the study that besides Bangladesh, some South Asian Association for Regional Cooperation (SAARC) countries like India and Pakistan are also under the grip of Industrial Sickness. But it must be noted here that they have already made some good progress in combating the problem. In India, some concrete research work and field study has been completed by researchers, academicians and DFI's like Industrial Development Bank of India (IDBI), Industrial Credit and Investment Corporation of India (ICICI) etc. They have also

amendments to the Income Tax Act and Companies Act and promulgated the Sick Industrial Companies (Special Provisions) Act, 1985. Similar steps have also been taken in Pakistan including the formation of Baig Committee. The DFI's like Industrial Development Bank of Pakistan (IDBP), Pakistan Industrial Credit and Investment Corporation (PICIC) has initiated programme aimed at rehabilitating the sick industrial units.

So far as Bangladesh is concerned, no tangible and well - conceived policy has yet been formatted to tackle the problem of Industrial Sickness. However, Government has floated Sick Industries Rehabilitation Cell, Industrial Development Council which purports to look into the problem. Keeping in view the complex and gigantic nature of the problem, it is hoped that all the concerned parties namely government agency, ministry, DFI's borrowers and entrepreneurs would be willing to extend their whole-hearted cooperation in building up a vibrant industrial sector in Bangladesh.

Chapter - 1

Phenomenon of Industrial Sickness and the Bangladesh Perspective

1.1 Introduction :

Industrial Sickness is an oft-quoted issue in Bangladesh. Sickness has been noted both in the public and private sector¹. Industrial sickness is noted in advanced and underdeveloped countries alike but the urgency of the problem is more pronounced and complicated in the Less Developed countries (LDC) like Bangladesh which suffers from low technology and managerial know-how and poor resources. Bangladesh has been experimenting with planned industrial development and a good number of industrial units have been started but many of them have become sick. In the opinion of some scholar, the magnitude of the problem of Industrial sickness is aggravating day by day and the chances of improvement is rather remote².

The causes which brought about ailing condition of the

1 The Chr. Nicholson Institute, 'Bangladesh- Country study and Norwegian Aid Review', Department of Social Science and Development. Bergen Norway, (1986).

M. Shamsul Huq, "Industries in problems looking for Answers", The Bangladesh Observer (June 24, 1989).

Anwarul Afzal, "The Public Sector Sickness Diagnoses and Remedies", The Bangladesh Observer (February 25, 1985).

Muzaffar Ahmed, "Industrial Sickness: Bangladesh Experience", Seminar on Accountants in the 1990's. Dhaka: (January 16-17, 1991).

2 Gian S. Sahota, "The Assessment of Impact of Industrial Policies in Bangladesh", Bangladesh Development Studies. Volume 19, No. 1 and 2 (March-June, 1991). pp 157-99. Journal of Bangladesh Institute of Development Studies.

industrial units are often designated as controllable and uncontrollable³. One academician has identified inefficient management, inefficiency in procurement of input and adverse socio-political environment as potential causes of Industrial Sickness in Bangladesh⁴. Style and quality of management has also been mentioned as determinant of Industrial Sickness in both economic and financial sense as has been found true for sick textile units in India⁵.

There are researchers who think that dedicated, careful and progressive managerial talent can cure sick industrial units and render them profitable however serious the problems may be⁶. One scholar suggests development of dynamic enterprise and dedicated management personnel for getting rid of Industrial Sickness⁷.

Apparently, there is a case to diagnose the underlying causes of Industrial sickness and employ professionally-oriented

³ Vinod Kumar Joshi. Management of Industrial Sickness. Jaipur; Kuber Associates and Publishers (1987). pp. 32-57.

⁴ Dr. Kazi Ahmed Nabi, "Industrial Sickness in Bangladesh; causes and remedies", paper presented at National Seminar on Development Financial Institution of Bangladesh: Policy Performance, Problems and Prospects. Dhaka; Jerman Cultural Centre, (December 18-20, (1992)).

⁵ Nalini S. Dave. Industrial Sickness and Key Areas of Management. New Delhi; Deep and Deep Publications, 1987. pp 17-21.

⁶ Manjunath Segde, "Western and Indian Models of Turn Around Management", Vikalpa Volume 7, No. 4, (Oct. - Dec. (1982)) pp. 289.

Den Schendel G.R. Paton and James Riggs, "Corporate Turn Around - A Study of Profit declined and recovery", Journal of General management. Volume 2, No. 3 (Spring, (1976)). pp. 115-42.

⁷ Peter Mathias. The First Industrial Nation: Economic History of Britain (1700 - 1914). 2nd edition. New York; Mathuen & Company, 1983. pp. 372-75.

and technically competent managerial personnel if the sick industrial units of Bangladesh have to be rehabilitated and the commitment of the Government to the free-market economy is to be materialised.

1.2 Statement of the problems :

In order to get a realistic exposure to Industrial Sickness, the term should be analysed and discussed carefully. A firm is deemed to be sick if it cannot repay its loan as and when it becomes due⁸. Failure to meet loan obligation arises from inability to earn a fair return on Investment (ROI)⁹. Failure to earn a fair ROI on invested fund may be due to ignorance, negligence and management inefficiency. These three are called internal variables. The external variables include poor viability to withstand normal economic hazards and face competition in the changing environment¹⁰.

Sickness is more pronounced in the case of new and small enterprises which are characteristic of a developing economy.¹¹ This is specially true for Bangladesh as has been found by

⁸ P.K. Sen. "Use of Fund Flow Ratios for Defining and Analysing Sickness", in Industrial Sickness and Revival in India: Essays, Cases and Debates (eds) S.K. Chakrabarty and P.K. Sen. Calcutta; Indian Institute of Management, (1980). pp. 249-52.

⁹ Bion B. Haward and Miller Upton. Introduction to Business Finance. New York; McGraw-Hill Book Company, (1953). pp. 260-61.

¹⁰ Bhabatosh Banarjee. Financial Policy and Management Accounting 2nd ed. Calcutta; The World Press Private Limited.(1987). p. 562.

researchers and scholars^{11,12}. Structural weakness and Government Policy may also contribute to Industrial Sickness¹³. Weak environmental condition is also responsible for industrial sickness^{14,15}. Intensity of sickness varies from country to country¹⁶. But for an advanced country, sickness is often regarded as beneficial as it encourages innovation and development^{17,18}.

Planners and Policy makers in Bangladesh are worried because of the phenomenon of growing Industrial sickness resulting in huge volume of outstanding loan taken from DFI's and bank^{19,20,21}. The government is also concerned over the recycling

11 Melvin J. Stanford. New Enterprise Management. Reston, Virginia; Reston Publishing Company, (1982). p VIII.

John Mandelbaum. Industrialization of the Backward Areas. Oxford; Basil Black Well Ltd., (1947). p. 3.

12 R.B. Sutcliffe. Industry and Underdevelopment; London; Addison Wesley Publishing Company, (1971). pp. 7-15.

13 B.K. Agarwell, "Sickness in Indian Industry", in Industrial Sickness and Revival in India. Calcutta; Indian Institute of Management, (1980). p. 1.

14 Jan Little, Peter Scitofsky and Maurice Smith. Industry and Trade in Some Developing Countries: A Comparative Study. London; Oxford University Press, (1970). pp. 1-12.

15 Jan Tinbergen. The Design of Development. Bultimore, USA; The Johns Hopkins Press, (1958). pp. 1-8.

16 M. Habibullah, "Industrial Sickness; A malady in the Public and Private Sector Enterprises", Paper presented at the ICMA Conference 1990. Dhaka;(July 27-28 (1990)). pp. 74-75.

17 Joseph Schumpeter. Business Cycle, Volume 2, New York. McGraw-Hill Book Company, (1939). pp. 45-47.

18 Maurice Web, "Predicting Australian Corporate Failure", The Chartred Accountants of Australia.(September, (1979)). pp 20-25.

19 "Press Conference address of Governor of Bangladesh Bank", The Bangladesh Observer. Dhaka; (May 20, (1991)).

20 The Annual report of BSB 1986. Dhaka; Bangladesh Shilpa Bank, Head Office.

21 The Annual Report of BSRS 1987. Dhaka; Bangladesh Shilpa Rin Sanghtsa, Head Office.

problem in banks and DFI's. The agony of the Government has been intensified by repeated occurrence of natural calamities like flood, cyclone, tidal bore etc.²². The Planning Commission of the Government is very much concerned over the pronounced under utilization of installed capacity, non-achievement of production target and low labour productivity^{23,24}. Liquidation of manufacturing units has already created stir among the professional accountants²⁵. Bulk of the industrial units in the private sector are unable to use even 10 percent of their

 22 Intermediate Technology Development Group. Survey of Agro-processing Industries with Case Studies on Paddy Milling and Oil Extraction. UK, Rucy; Myron (March, (1989)).

Mohiuddin Alangir. Bangladesh A Case of Below Poverty Level Equilibrium Trap. Dhaka; The Bangladesh Institute of Development Studies, (1978). pp. 23, 58-99.

23 Third Five Year Plan. Dhaka; Planning Commission, Government of the Peoples Republic of Bangladesh.(Dec. (1985)) p 9

24 The First Five Year Plan (1973-78). Dhaka; Goernment of the Peoples Republic of Bangladesh. (Nov., (1973)). pp. 203-207.

The Two year Plan (1978-80). Dhaka; Planning Commission, Government of the Peoples of Bangladesh (Sept., (1978)). pp. 52.

The Second Five Year Plan (1980-85). Dhaka; Planning Commission, Government of the Peoples Republic of Bangladesh. (Dec., (1980)). pp. 233-45.

Quazi Khalequzzaman Ahmed, "Bangladesher Chaturtha Pancha Barshiki Parikalpana (1990-95); Kichu Montabbya," The Dhaka Digest Volume 4, No. 2 (May, (1990)). pp. 15-20.

"Problems and issues of stuck-up advances", Seminar Organised by Bangladesh Institute of Bank Management. Mirpur, Dhaka; (July 30, (1986)).

25 Sadrel A.L. Raza, Montazuddin Ahmed and Wahiduddin Mahmud, "The Role of Small and Medium Scale Industries in the Industrial Development of Bangladesh", in The Role of Medium and Small Scale Manufacturing Industries in Industrial Development; the experience of Selected Asian Countries. Manila; Economic and Development Resource Centre, Asian Development Bank (Jan., (1990) p. 80.

installed capacity²⁶.

From the foregoing discussion, it is quite clear that the economy of Bangladesh is under severe pressure due to the outbreak of industrial sickness in epidemic form. For the purpose of fostering industrial development in Bangladesh, a huge amount of public money has been mobilised through BSB and other DFI's and banks and the same was distributed as project loan to the intending entrepreneurs. The policy makers expected that pumping of such huge resources would help in recycling the surplus in the form of savings and profit arising out of higher income from industry and the cycle would pulsate without any break. One noted American Economist observed that if the total flow of credit in a country continues to be good, it would surely enhance the standard of living of the people; in case the situation is reversed, the same people would be exposed to economic hardship and misery"²⁷.

Ironically enough, similar situation has transpired in Bangladesh where large sums of money are lying blocked in banks and DFI's and the list of sick industries are becoming longer and longer. A noted economist in a talk before the Bangladesh Economic Association expressed the view that there was a boom in private sector industrial investment between the year 1977-82 but

²⁶ Hafiz G.A. Siddiqi. "Industries with growth Potential; A Review of Fourth Five Year Plan Strategies," The Bangladesh Journal of Political Economy volume 11, No. 2B (Conference issue (1991)). pp. 116-17.

"Determination of Industrial Sickness" Editorial comment, The Cost and Management Accountant. Volume 9, No. 1 (Jan. - Feb, (1986)). p. 1.

²⁷ N. Uddin. "Blood-Sucker Bank Loanees", The New Dhaka Digest. Dhaka; (July 1992).

it suddenly dropped with the suspension of foreign loan and ultimately brought about sickness²⁸.

The researcher is engaged in teaching management in the Bangladesh University of Engineering and Technology. He has been currently attending seminar and conferences for his professional growth which is essential for efficient teaching. Review of management literature and exposure to deliberations in the seminars and conferences has convinced him that the proper diagnosis of the causes which have been making the industrial units sick and creating recycling problem in the banks and DFI's is urgently required.

Even though a number of studies have been undertaken in Bangladesh regarding various problems of the industrial sector (For details, refer to the Literature Survey chapter) but none of them addressed the problem of industrial sickness exhaustively. Authentic data, literature and other information relating to industrial sickness in Bangladesh is scanty or non-existent. The present study sought to overcome this vacuum. Sick industry is a definite drag on the country's scarce resources mobilised through public in the form of deposits and from the donor organisation in the form of loan. A sick industry as such cannot face competition in the domestic as well as the export market. The industrial sector of Bangladesh also presented a very gloomy picture. The researcher has therefore decided to embark upon a realistic study of the problem as a measure of personnel satisfaction and professional development.

²⁸ Prof. Wahiduddin Mahmood. "Macro-Economic Policies", Seminar on Development Agenda for the 90's. Dhaka; Bangladesh Economic Association, (July 31, 1992).

1.3 Objectives of the Study :

The study was undertaken with the following objectives in mind :

- a. To investigate and identify the underlying causes of sickness in selected industrial units of Bangladesh;
- b. To formulate critria to designate an industrial unit as sick;
- c. To evolve suitable method of diagnosing the signs and symptoms of sickness in a given industrial unit;
- d. To ascertain whether the management could have predicted sickness and thus protect itself from becoming actually sick through adaption of appropriate remedial measures;
- e. To ascertain whether sickness was real or fake;
- f. To ascertain whether sickness developed at the embryonic or implementation stagre;
- g. To review the policies so far adopted by Govedrnment of Bangladesh (GOB) to tackle the problem of industrial sickness;
- h. To suggest ways and means of recovery, rejuvenation and rehavilitation of sick industrial units of Bangladesh.
- i. To develop a model for the use of entrepreneus which will facilitate the task of predicting sickness in advance;

1.4 Hypotheses of the Study :

The various hypotheses which were developed and tested through the study are as follows:

- a. Industrial sickness occurs due to unrealistic feasibility report which is based on poor perception of risk;
- b. Inadequate demand forecasting and market survey also leads to industrial sickness;
- c. Sickness is often false and intentional rather than real;
- d. An industrial units tends to become sick owing to management incompetence;
- e. Wrong and unpragmatic financial planning invariably leads to industrial sickness;
- f. Lack of coordination between concern industrial units and other Government agencies are also responsible for industrial sickness;
- g. Inadequacies of the provisions of Companies Act 1913 and other legal enactments are also responsible for industrial sickness in Bangladesh;
- h. Absence of sound policy formulation in the areas of fianance, production, marketing and personnel and their proper implementation also causes industrial sickness;
- i. Unbalanced machinery, poor repair and maintainance are also responsible for industrial sickness;
- j. Lack of cost consciousness favours wastage, pilferage, theft

etc. all of which kill cost effectiveness and pave the way towards sickness in industry.

1.5 Importance of the Study :

The study has been considered important for several reasons. Firstly, Government is committed to the rapid industrialization of the country for employment creation, poverty alliviation and creation of demand for firm products. But the growth of industry has remained stagnant causing disappointment among planners, policy-makers and doner agencies like World Bank, International Monetary Fund (IMF), Asian Developopment Bank (ADB) who are helping Bangladesh in carrying out its industrialisation programme. Secondly, the poor performance of the industrial sector has also adversely affected the nonindustrial sector thereby aggravating the problem of unemployment.

Thirdly, industrial units have been started with a substantial amount of loan capital from BSB, BSRS and Nationalised Commercial Bank (NCB). Poor performance and resulting sickness has made al these industrial units a totally losing concern who are finding it dificult to survive. The volume of accumulated loan has robbed the liquidity of the affected industrial units and consequently they are unable to repay the loan in due time. This has also created recycling problem in banks and DFI's which is preventing it from helping the new industrial projects.

Fourthly, unless effective measures are undertaken to help the ailing and financially sick industrial units, it would lead

to loss of investment made by banks and DFI's, loss of employment opportunity and permanent impairment of the financial soundness of the affected industrial enterprises. Thus the problem is important enough to be investigated.

The study was expected to provide some concrete facts and figures to the industrial units, the financial agencies and the Government organisations and thus enabling them to chalk out programme for rejuvenation and rehabilitation of sick industrial units of Bangladesh. The researcher hoped that his findings would enable an industrial unit to be careful, realistic, innovative and tactful in establishing and running an industrial unit. Lastly, the study was designed to provide data to the industrial entrepreneurs to make proper demand forecasting and market survey so that their unit could become cost-effective with high inventory turnover and fair ROI rate.

1.6 Coverage of the Study :

The study covered 24 industrial units belonging to following industrial subs-sectors viz :

- a. Textile
- b. Food
- c. Chemicals and Pharmaceuticals
- d. Paper and Paper Products
- e. Electrical Goods
- f. Cold Storage.

The above sub-sectors were selected since House of

Consultants has already identified them as sick. A conference paper also came to the same conclusion after studying the various BSB-financed projects. These units are located mainly in Dhaka Zone with a small number from Chittagong, Rajshahi and Khulna. With a view to enhance the objectivity of the study, it was decided to evaluate the performance of the private sector companies (Joint Stock Companies). Another object of limiting the coverage of the study is to keep it within reasonable bounds considering the constraints of time and resources.

1.7 Limitation of the Study :

The study does not cover industrial units financed by BKB, BSRS, NCB, Private Bank and Islamic Bank which are currently operating in the country. Industrial undertakings belonging to the category of Sole Tradership and Partnarship have been kept out of the perview of this study as they are not financed by BSB.

Another limitation of the studies was that it did not cover public sector enterprises. The reason is that even if some of the industrial units like Bangladesh Machine Tools Factory, Zia Fertilizer Factory, Progoti Industries etc. are somewhat sick but their financial problems are being taken care of by the Government through replenishment of losses and advancement of livaleral credits from the state exchequer.

For the purpose of analyzing the fionancial statement data, ratio analysis technique (Univariate and Multivariate) was used. Two important accounting models as suggested by Prof. Altman and Taffler was used in this study. The researcher admits that some

new model should have been developed using indigenous data but the same could not be undertaken due to the constraints of time and resources. It is hoped that future researchers would be able to accomplish this unfinished task.

Inspite of the best intention of the researcher no separate model based on MDA technique could be developed for predicting industrial sickness in Bangladesh. An attempt was made to contact Prof. Srivastava to seek his help in developing such a model but it could not be accomplished. For this purpose, the assistance of Dhaka University Computer Centre and Bangladesh University of Engineering and Technology (BUET) Computer Centre was also sought. But this mission could not be accomplished since required trained personnel with adequate exposure to accounting discipline was not available.

1.8 Scheme of the Study :

The study comprises of six different chapters. The first chapter gives an outline of the problem under investigation and the various hypotheses including the objective and coverage of the study.

The second chapter examines in details the theoretical aspects of the problem and review of reasearch work already carried out in this particular field.

The third chapter explains the methodology followed in carrying out the study.

The fourth chapter evaluates the impact of external economic

environment on the selected industrial enterprises including internal factor (Management) and their contribution towards industrial sickness.

The fifth chapter presents the results of financial statement analysis and other information. The technique of ratio analysis was used to substantiate finding of the study. The last and the sixth chapter attempted to summarise the study and its various findings and suggations.

Chapter - II

Literature Survey on Industrial Sickness or Corporate Failure

2.1 Introduction :

An industrial organisation is a man-made contrivance for the purpose of carrying out organised economic activity¹. It operates within a certain socio-economic environment which is full of risk and uncertainty². Most of these external factors which are called "normal economic hazards" could be surmounted by an industrial organisation provided it is run by an efficient and professional management³. It is regarded as an open system which must strive hard to maintain a "steady state" between the internal and external environmental factors⁴. Moreover it must adopt it self to the turbulent environment around it, otherwise it is destined to fail and become a corporate dinosaur⁵.

¹ Stephen H. Archer and Charles A. D'Ambrosio. Business Finance Theory and Management. New York; The Macmillan Company, (1966). pp. 177-78.

² Dennis J.O., O'Connor and Robert T. Bueso. Management Finance Theory and Technique. Englewood Cliffs; Prentice-Hall, Inc., (1966). pp. 15-20.

Ezra Solomon and John J. Pringle. An Introduction to Financial Management. New Delhi; Prentice Hall of India, Private Ltd., (1978). p. 600.

³ William K. Hall. "Survival Strategies in a Hostile Environment", Harvard Business Review. (Sept-Oct, 1980) pp 180-95

⁴ Elwood S. Buffa. Modern Production Management. 4th ed. New York; John Wiley & Sons Inc., (1973). pp. 46-51.

Harold Koontz, Cyril O'Donnel and Henry Weihrich. management. 6th ed. New York; McGraw-Hill Book Company, (1984). pp 7, 74-95, 151.

⁵ Alvin Toffler. The Adoptive Corporation. New York; McGraw-Hill Book Company, (1985). p. 45.

Rice in one of his research has shown that an industrial organisation could be treated and grown to maturity, otherwise it would wither away and die⁶. An industrial organisation like human being has a limited span of life. It passes through the stags of birth, growth, maturity and decline⁷. The management of an enterprise should try utmost to prolonge the growth phase through introducing new product and process⁸. When an enterprise reaches maturity with no scope of further expansion or diversification, it enters into the stage of decline⁹. At such a crucial juncture of the life cycle of the enterprise, the management should try to forestall decline and prolong growth and maturity phase¹⁰. Sickness is bound to occur to an industrial enterprise which fails to achieve the forgoing goals¹¹.

2.2 Definition of Industrial Sickness :

An industrial concern is run on the basis of a "Going Concern" concept¹². It can go on carrying out its affairs by husbanding material and human resources and generate internal

⁶ A.K. Rice. The Enterprise and the Environment : A System Theory of Management Organisation. London; Tovistock Publications, (1961). pp. 210-20.

⁷ J. Fred Weston and Eugene F. Brigham. Financial Management. 6th ed. Homewood, Illinois: The Dryden Press, (1978). pp. 892-93.

⁸ Benton E. Gup. Principles of Financial Management. New York; John Wiley & Sons Inc., (1983). pp. 20-25.

⁹ Ibid. p 24.

¹⁰ Floyd F. Burtchett and Clifford M. Hicks. Corporation Finance : Policy and Management. 4th ed. Lincoln, Nebraska: Johnson Publishing Company, (1964). p. 626.

¹¹ Benton E. Gup. Op.cit. p 25.

¹² Salma Krim, "Basic Accounting Principles and Applications", The Bangladesh Accountant volume 12, No. 2 (April-June, (1989)). pp. 67-75.

surplus to pay investors and creditors and at the same time reduce long-term debt¹³. But it has been found that industrial concerns fail to attain the desired goal of liquidity and profitability and eventually become sick¹⁴. Industrial sickness is essentially a symptom of inadequate earning which aggravates the liquidity and profitability position¹⁵.

Various authors and researchers have looked at the phenomenon of Industrial sickness from different perspectives. Walter and Donaldson¹⁶ has viewed it as "Technical Insolvency" where a firm is unable to meet its outstanding financial obligation or its current assets exceeds the current liabilities. It simply means lack of liquidity and may be of a temporary nature.

Again Weston use the term "Insolvency in Bankruptcy" where the firm's total liabilities exceeds its total assets¹⁷. Others restrict it to a real insolvency case where the firm's total liabilities exceeds the value of its assets and it is unable to meet the current debt obligation. Here the value of the firm represents the value of the firm's assets as a going concern or

13 H.S. Diamond. Pattern Recognition and the Prediction of Corporate Failure. Ph.D.Dissertation. New York University, (1976).

14 John J. Clark, Margaret T. Clark and Peter Algers. Financial Management : A Capital Market Approach. Boston; Holbrook Press Inc., (1976). pp. 567-70.

15 Jackson Martindell. The Appraisal of Management. Rev. ed. New York; Harper and Row, (1965). pp. 35-40.

16 James E. Walter, "Determination of Technical Insolvency", Journal of Business, Volume 30, No. 2. (Jan., (1957)) pp. 30-43.

G. Donaldson, "Strategy for Financial Emergencies", Harvard Business Review, Volume 47, No. 3 (Nov. - Dec., (1969)) pp 67-69.

17 J. Fred Weston, "Financial Analysis : Planning and Control," Financial Executive. Volume 3, Number 1 (July, (1965)) pp. 40-42.

the value of the firm in liquidiation whichever is higher¹⁸. There are other authors who prefer to use the term "Business Failure" or "Corporate failure" which may again be categorice into Economic Failure and Financial Failure. Brigham¹⁹ defines Economic Failure as a type of failure which implies that the firm's resources do not cover total cost including Cost of Capital. Schall and Halley²⁰ defines Economic Failure where the firm does not generate sufficient after text revenue which can cover the cost of production and yield a reasonable rate of ROI. Hunt et al.²¹ uses the term "Business Failure" to the those cases of liquidiation of business where it has been rendered financially incapable of prosecuting its normal business operation. According to Dun and Brodstreet, the term "Business Failure" refers to those causes in which the firm is involved in a court proceeding or a voluntary action that is likely to end up in loss to the creditors²².

Parker defines a "Financial Failure" as a combination of Economic Failure, i.e., achieving a rate of return adjusted for risks becomes significantly lower than the prevailing rate of return and Legal Failure i.e., Insolvency²³. Schall and Halley

¹⁸ Lawrence J. Schall and Charles W. Halley. Introduction to Financial Management. 2nd ed. New York; McGraw-Hill Book Company, (1980). p. 741.

¹⁹ Eugene F. Brigham. Financial Management: Theory and Practice. 3rd edition New York; C.B.S. College Publications, (1962). pp. 761-62.

²⁰ Schall and Halley Opcit. p. 740.

²¹ Person Hunt, Charles W. William and Gordon Donaldson. Basic Business Finance: Text and Cases. Rev. ed. Homewood Illions; Richard D. Irwin Inc., (1961). pp. 295-310.

²² Dunn and Brodstreet. "The Failure Record: A comprehensive Failure Study", New York; Dun and Bradstreet Inc., 1958. pp 30-42

²³ Richard H. Parker (ed). Macmillan Dictionary of Accounting. London; Macmillan Press (1984). p. 30.

further adds that a Financial Failure or a Contractual Failure of a firm may occur when it becomes very illiquid and it is unable to meet the maturing financial obligation to the creditors²⁴.

In the opinion of Raman, an industrial organisation may be termed as sick which is facing imminent collapse or failure dew to some serious financial difficulties but has not totally failed²⁵. Therefore sickness represents various stages or failure as noted above²⁶. Highlighting the close relationship between Business Failure and Industrial Sickness, Srivastava et al. stepulates that an industrial concern may be termed as sick (in economic sence of the term failure) where it is unable to pay back its loan to the banks and DFI's and also pay dividend, and share price goes down (sick in business sence of the term failure)²⁷.

Now let us examine the various definition of the term Industrial Sickness put forward by different authors and institution. They are as follows :

a. An industrial organisation may be regarded as sick if it has increased Cash Loss for one year and in the opinion of the bank is likely to continue to incor Cash Loss in the current as well as in the coming year and which has an imbalance in its capital structure or current ratio of less than 1:1 and warsening debt

24 Schall and Halley Opcit. P. 741.

25 R.V. Raman, "Industrial Reconstruction : The Task Ahead", in Industrial Sickness and Revival in India (ed). S.K. Chakraborty and P.K. Sen. Calcutta; Indian Institute of Management, (1980). pp. 193-94.

26 "Financial Ratios as Forewarning Indicator of Industrial Sickness", Bombay: Industrial Credit and Investment Corporate of India (ICICI), (1979).

27 S.S. Srivastava and R.A. Yadav. The Management and Monitoring of Industrial Sickness. New Delhi; Concept Publishing Company, (1986). p. 11.

equity ratio²⁸.

b. A sick unit is one which is unable to repay its warking capital loan and also suffers from unbalanced capital structure and cash loss²⁹.

c. A sick unit is one which fails to generate internal surplus on a continuous basis and depends for its survival upon frequenet infusion of external fund³⁰.

d. A sick industrial unit is one whose Net Worth has been reduced to one-half of its original value and has incurred cash loss for three consecutive years and not recovered in the following year³¹.

e. An Industrial unit may be regarded as sick whose financial viability is threatened by such factors like inefficiency in the field of management, marketing, finance and poor labour management relationship³².

f. A sick unit is one whose capital volume has been eroded by 50 percent or more as a result of continued loss³³.

²⁸ A.K. Chatterjee. Maanagement Technique of Bank Lending. 1st ed. Bombay; Himmalaya Publishing Company, (1982). pp. 215-20.

Business Standard. Calcutta; (Feb. 23, (1986)). p. 1.

²⁹ Bhabatosh Banarjee. Financial Policy and Management Accounting. 2nd ed. Calcutta; The World Press Private Limited, (1987). p. 361.

³⁰ S.K. Bhattacharya, "Sick Industry and India", in Industrial Sickness and Revival in India. Calcutta; Indian Institute of Management, (1980). p. 35.

Bhaskar Banarjee. "Application of Statistical Techniques in Identification and Signalling of Sickness", The Chartard Accountant (May, (1979)). p. 1008.

³¹ B. N. Pai. "Industrial Sickness: Banks Role as a Family Doctor", The Economic Times. (Feb 4, (1989)). p. 5. Col. 3-6.

³² S.S. rivastava and Yadav Opcit. pp. 10-11.

³³ Bhabatosh Datta. "The Sick Industries Bill", Business Standard. Calcutta; (Sept. 10, (1985)).

In the above definitions, the criteria of continued cash loss and worsening debt-equity ratio has been mentioned as a measure of sickness. But Professor Banarjee disagrees with such a view on the ground that they are vague and do not depict the real problem of sickness³⁴. In his opinion, the drawbacks of the RBI guidelines suggested for defining Industrial Sickness could be overcome through applying the provisions of Sick Industrial Companies (Special Provision) Act, 1985³⁵. The various guidelines³⁶ are :

An industrial unit may be termed as sick where the following symptoms are present :

- (i) The company has been in existence for the last seven years;
- (ii) Its Net Worth has been fully eroded and
- (iii) There has been cash loss for the last two consecutive years.

According to Professor Srivastava et al.³⁷ there may be three view points regarding sickness:

- a. At Government level in India, Industrial Sickness gets recognised when an industrial unit is on the verge of failure or actually closes down throwing large number of people out of employment;
- b. At the industry level, the problem gets recognised where the non-payment of installment on term loan becomes widespread and continuous for a long time thereby making the loan recovery

³⁴ B. Banerjee, "Signalling Corporate Sickness: The RBI Guideline - An Over View", Business studies, Calcutta University. (Jan., (1987)). pp. 61-66.

³⁵ Sick Industrial Companies (Special Provision) Act, 1985. Lalbug, Lucknow: Eastern Book Agency, (1989).

³⁶ Ibid. p. 5.

³⁷ Srivastava and Yadav. Opit. p. 11.

programme uncertain;

c. From enterprise point of view, an industrial organisation is considered to be sick when it fails to pay dividend, its future prospects look bleak and the market price of its share tumble down.

A careful examination of the above definition of Industrial Sickness suggested by different authors and organisation clearly show that the term reflects different view points. The industrial units which fulfill the above criteria may be considered as sick but they are not the only one which are sick. There are less conspicuous cases and sometimes they are large in number. These units are not only sick but virtually they are dying. They have long since passed the stage of incipient sickness where their chances of recovery might have been good. Thus it is more important to define processes to sickness rather than sick units. Further it may be added here that in view of the experience with Industrial Sickness in Bangladesh, the possibility of a fake or pretended sickness can not be over-ruled. For example a naughty boy might put some garlic under his armpit to develop artificial temperature (fever) and use the same as an excuse for remaining away from school. In the same way, an unscrupulous owner of an industrial unit might portray himself as sick through window dressing and other manipulatory tactics.

In general term, an industrial unit is prone to sickness which fails to maintain accurate and upto date books of accounts. In fact these units are unable to monitor there progress or regress and become an easy victim of sickness. Thus for the purpose of the study, an industrial unit may be defined as sick which satisfied the following conditions :

a. the unit is in existence for the last seven years; ✓

- b. Net working capital has become negative;
- c. the accumulated volume of losses have exceeded the sum total of capital and reserves taken as a whole;
- d. its net worth has been eroded by 50 percent or more; and
- e. its profit after meeting all expenses have become equal to or less than current interest burden.

2.3 Causes of Industrial Sickness :

In the preceding section, it was made clear that the authors have used the term Corporate Failure and Industrial Sickness interchangeably since there exists a close association between the two phenomenon. Thus it has become quite imperative to examine the various causes of failure and then the causes of sickness would be dealt at length. The author hopes that such an approach would enable us to identify precisely the various causes of Industrial Sickness. After consulting the works of Schall and Haley³⁸; Burtchett and Hicks³⁹; Stanford⁴⁰; Gutman and Dougall⁴¹ Dunn and Brodstreet⁴²; Weston et al.⁴³; Kolb⁴⁴;

³⁸ Schall and Halley. Opcit. pp 740-41

³⁹ Butchett and Hicks. Opcit. pp. 626-28

⁴⁰ Melvin J. Stanford. New Enterprise Management. Reston, Virginia; Reston Publishing Company, (1982). p. 4.

⁴¹ Harry G. Guthman and Harbert E. Dougall. Corporate Financial Policy. 4th ed. New Delhi; Prentice-Hall of India Private Limited, (1966). pp. 627-29.

⁴² Dun and Bradstreet. Opcit. pp. 30-42.

⁴³ Weston and Brigham. Opcit. pp. 893-94

⁴⁴ Burton A. Kolb. Principles of Financial Management. Plano, Texas; Business Publications Inc., (1983). pp. 702-03.

Hastings⁴⁵; Bonneville⁴⁶; Bleck⁴⁷; Guthman⁴⁸ and Charlesworth⁴⁹; some of the leading causes of corporate failure was identified which may be enunciated as follows :

1. Management incompetence ✓
2. Financial incompetence (shortage of working capital, over-capitalization, over-trading) and heavy dependence on outside debt
3. Poor sales promotion or inadequate sales ✓
4. Uneconomic expansion ✓
5. Unsound dividend policy ✓
6. Poor control on operating expenses, defective credit policy and overdose of short and long term credit. ✓
7. Inadequate record keeping and cost accounting system ✓
8. Adverse trend in business cycle and economic activity e.g., contruction in demand, revolutionary legislation affecting industry, high customs and excise duty;
9. Political condition and policy of government;
10. Technological development
11. Inefficient production and marketing policy
12. Poor quality control ✓

⁴⁵ Paul G. Hastings. The Management of Business Finance. Princeton; N.J. ; De Van Nostrand Company, (1966). pp. 471-77.

⁴⁶ Josheph H. Bonniville, Lloyd H Deving and Harry M. Kelley. Organising and Financing Business. 6th ed. Englewood Cliffs, N.J.; Prntice-Hall Inc., (1989). pp. 241-49.

⁴⁷ Curtis J. Bleck. Financial Analysis for Decision Making. New Delhi; D.P. Taraporevolla and Sons Private Limited. (1961). pp. 153-54.

⁴⁸ Harry G. Guthman. Analysis of Financial Statment. 4th ed. New Delhi; Prentice-Hall of India Private Ltd., (1978).pp.239-42.

⁴⁹ Harold K. Charlsworth. "The Uncertain Future of Small Business: Can the Picture be Reversed". MSU Business Topics Volume 18, No. 2, Graduate School of Business Administration: Michigan State University, (Spring, (1970)). pp. 13-20.

13. Inflation
14. Defective purchase policy
15. Inadequate maintenance and depreciation policy.

Now before we discuss the various cause of industrial sickness, proper attention must be given towards its dynamic process of growth. In this connection Prof. Srivastava et al.⁵⁰ argues that Industrial Sickness grows over a period of time. The following diagram illustrates the point under consideration:

Table 2.1 Organic Process of Industrial Sickness

Healthy Unit Criteria	Tending Towards Sickness Criteria	Incipient Sickness	Sick	Totally Sick
Cash Profit(+)	Cash Profit(-)	Two or more negative	All negative criteria	Sickness or Closer ✓
Net working Capital (+)	Net Working Capital(+)			
Net Worth(+)	Net Worth(+)			

A close look at the organic process of Industrial Sickness reveals that an organisation must have at its disposal the accurate and upto date figure of Cash Profit, Working Capital and Net Worth to monitor its performance and adopt appropriate remedial measures. For the purpose of identifying the underlying causes of sickness, the researcher has consulted the studies carried out by sixteen authors (51-66) and two profession bodies (59-60). These causes copuld be broadly divided into two groups namely internal and external. The various causes can be listed as

⁵⁰ Srivastava and Yadav. Opcit. p. 13.

⁵¹ A.K. Chattarjee. Opcit. pp. 689-90.

- 52 Pradip N. Khandwalla, "Effective Turn around Management: Anatomy of a Corporate Sickness", The Economic Times. (Feb. 20, (1986)). p. 5, Col. 2-4.
- 53 M.S. Gujral, "Industrial Sickness: Causes and Cure", The Economic Times. (August 9, (1984)). p. 5, Col. 5-6.
- 54 L.R. Pillai, "Industrial Sickness: Problems and Solutions", The Economic Times. (Dec. 28, (1985)). p. 5, Col. 3-6.
- 55 M.R. Shorff, "Some Aspects of Policy Regarding Sick Units", Industrial Sickness and Revival in India. Calcutta; Indian Institute of Management, (1980). p. 260.
- 56 V.S. Dixit, "Industrial Sickness: The Indian Perspective", A Paper Presented at the All-India Chartered Accountants Conference. Calcutta; Bengali Version Published in Arthonaitik Samachar (ed). A.B.M. Azizuddin. Volume 1 and 2, No. 17-18 (January 1, (1987)). pp. 19-26.
- 57 B.S. Gupta, "Industrial Sickness: Diagnostics and Remedies", The Economic Times, (June 24, (1982)). p. 7, Col. 1-4.
- 58 P. Chakrabarty, Executive Opinion on Industrial Sickness", The Management Accountant. Jan., (1983)). pp. 530-37.
- 59 Gouranga P. Chattopadhyaya. "Industrial Sickness: A Psychodynamic Interpretation", The Economic Times. (October 23, (1984)). p. 5, Col. 3-6.
- 60 B.K. Agarwal, "Sickness in Indian Industry, in Industrial Sickness and Revival in India. Calcutta; Industrial Institute of Management, (1980). pp. 252-60.
- 61 S.K. Chakraborty, "Towards National Policy Framework for Controlling Industrial Sickness", in Industrial Sickness and Revival in India. pp. 275-80.
- 62 D.P. Barry, "Sickness in India: Prevention at the Incipient Stage", in Industrial Sickness and Revival in India. pp. 145-60.
- 63 Pradip N. Khandwalla, "Turn around Management - IV: The Institutional Constraints", The Economic Times (March 8, (1986)). p.6, Col. 2-3.
- 64 P. Subramaniam, "Industrial Sickness: Strategic Approach to Turnaround", The Economic Times. (Dec. 6, 1984). p. 5, Col 3-6
- 65 Seymour Friedland. The Economics of Corporate Finance. Englewood Cliffs. N.J.: Prentice-Hall Inc., 1966. pp. 258-59.
- 66 Clark et al. Op cit. p. 568.
- 67 Reserve Bank of India. "A Study on Industrial Sickness", The Management Accountant. (Dec. 10, (1983)). p. 523.
- 68 Industrial Development Bank of India.

follows :

Internal Causes

Inadquate Management Practice

1. Absence of Long-range Planning
2. Wrang Product Mix
3. Faulty Production Planning and Control
4. Poor Quality Control
5. Poor Inventory Control
6. Faulty Marketin Plan
7. Inadequate Cost Control
8. Low Productivity
9. Under-utilization of Capacity
10. Poor Sales Promotion
11. Lacck of Product Divirsification
12. Lack of Well-defined Corporate Objective and Organization Structure
13. Delayed/Neglected Balancing, Moderation, Reorganisation and Extension (BMRE)
14. Inadequate Maintenance and Overhaul of Equipment and Facilities
15. High Level of Frustration Among Officers and Staff
16. Autocratic and One-man rule
17. Diversion of Fund
18. Utilization of Short-term Loan for Long-term Purpose and Vice Versa
19. Manpower in Excess of Requirement.

External Causes

Market Constraints

1. Economic Recession
2. Drop in Demand
3. Lack of Purchasing Power
4. Government Price Control (Administered Price)

Supply Constraints

1. Shortage of Raw Material Power and Fuel
2. Shortage of Credit Facility
3. Shortage of Working Capital
4. Inadequate and Expensive transport Facilities

Socio-political Environment

1. Government Policy
2. Policy adapted by the DFI's and other infrastructural Development Agencies
3. Undue Political Patronage and Interference
4. Poor Industrial Relations.

Bhat et al.⁶⁹ has tried to designate the causes of sickness as Actors (representing persons or agencies) and Factors (representing other than persons) which may again be internal or external in nature. Hegde et al.⁷⁰ in his study has shown that a number of factors may be responsible for sickness. Another study by Khandwala⁷¹ reveals that DFI's also palyed a significant role in causing sickness.

⁶⁹ K.S. Bhat, E.S. Mishra and M.G. Hegde, "Industrial Sickness: Actors and Factors Responsible", The Economic Times (Aug. 16, 1985). p. 5, Col. 3-6.

⁷⁰ Manjunath G. Hegde, "Western and Indian Models of Turnaround Management", Vikalpa, Volume 7, No. 4, (Oct.- Dec. 1982). pp. 289-304.

⁷¹ Prodip N Khanawala, "What the Financial Institution can do to Preven Sickness", Vikalpa. Volume 13, No. 2 (April-June, 1988). pp. 1-23.

Since the above noted causes of industrial sickness appears to be very brod and exhaustive, Bidani and Mitra⁷² has suggested an anatomical model of an industrial unit to facilitate the identification of causes of sickness in industry. In this model, the management occupies the pivotal place and the four functional areas i.e., Finance, Production, Marketing and Personnel, each of them again has there internal and external facets) surrounds the same. This anatomical model has also been used by Joshi⁷³ in his research work. Therefore for the research purpose, it has decided to use the same anatomical model. Accordingly, the performance of the sample industrial units in respect to the above factors would be evaluated to pinpoint the causes of sickness.

2.4 Symptoms of Industrial Sickness :

Every sick industrial unit throws up some signals and the signals turn into symptoms when they continue for a long time⁷⁴. In the opinion of Professor Srivastaba et al. these symptoms have to be monitored regularly and timely remidal action must be taken before the sickness becomes critical enough⁷⁵. The timely detection of such symptoms by the management at an incipient stage becomes very vital since and industrial unit does not respond like a human being⁷⁶. Thus management has to keep itself

⁷² S.K. Bidani and P.K. Mitra, Industrial Sickness: Identification and Rehabilitation. New Delhi; Vikas Books, 1981. p.13.

⁷³ Vinod Kumar Joshi. Management of Industrial Sickness. Jaipur; Kuber Associates and Publisher, 1987. pp. 12-16.

⁷⁴ Harry G. Guthman. Opcit. pp. 44-47.

⁷⁵ Srivastava and Yadav, Opcit. pp. 15-16.

⁷⁶ D.P. Barry. Opcit. pp. 32-33.

abreast of the symptoms of sickness and adopt appropriate measures to reduce or eliminate the same⁷⁷. These symptoms may again be classified into industry-related and DFI' related group. A comprehensive list of symptoms is given below :

Unit-related Symptoms :

1. Slow Turnover
 2. Over-valuation of Current Assets
 3. Labour Unrest
 4. Change in Accounting Period to cover up Profit or Loss
 5. Adoptation of Different Stock Valuation Method for Different Accounting Period
 6. Qualification in the Auditor's Report to the fact that certain essential provision have not been made in the accounts
 7. Over-valuation of Fixed Assets without assigning any valid reason.
 8. Fall in Market Price of Share
 9. Low Cash Position
 10. Unfavourable Trend in Accounting Ratios
 11. Frequent Postponement of Repairs and Maintenance
 12. Inadequate Rate of Return as compare to risk involved
 13. Excessive Inventory and Fixed Assets
 14. Increasing volume of Accounts Payable and decreasing volume of Accounts Receivable
 15. Declining Net Worth
 16. Average Cost Exceeding Average Revenue
 17. Inadequate Working Capital
 18. Reduction in Dividend
-

⁷⁷ Srivastava and Yodav, Opcit. pp. 18, 20.

19. Change in Accounting Practices i.e., Change in the Basis of Depreciation, Capitalisation of Interest etc.
20. Evidence of Management Paralysis i.e., slow respond to problems, unconcerned attitude towards strike, lockout etc. and adverse movement in the market
21. Fall in Market Share
22. Huge idle Capacity
23. Low Labour Productivity
24. Technological Obsolescence
25. Unbalanced Organisation Structure
26. Frequent Breakdown of Machinery and Equipment
27. Poor Quality of Product
28. Delayed preparation of Annual Accounts
29. Los morale of employees
30. Widespread Use of Creative Accounting or Window-dressing Like treating provision as Reserves, upward revaluation of Assets, Treating Extra-ordinary Income as Ordinary and Vice Versa.

DFI-related Symptoms :

1. Non-payment of loan installment and other statutory dues
2. Delay in submission of Control Statement
3. Tardy retirement of Bills
4. Delayed submission of periodic Final Accounts
5. Non-operation of cash credit accounts owing to diversion of sale proceeds
6. Fraudulant disposal of assets charged to banks and DFI's
7. Irregular Bank Account
8. Frequent request for loan from Bank and DFI.

2.5 Identification of Industrial Sickness :

It is now known that an industrial unit might become sick due to complex interplay of certain internal and external factors. While it is true that such sickness could hardly be avoided or eradicuted altogether, yet some positive step like regular evaluation of performance could be adopted to reduce its intensity⁷⁸. A sick industrial unit may be compared with a diabetic patient who could never be fully cured but still lead a normal life through proper diet, medicine and exercise⁷⁹.

The first essential step involved in identification of sickness is to ascertain its existence before taking any measure for its solution⁸⁰. This task could be performed meaningfully by evaluating and monitoring the performance of an industrial unit against the symptoms of sickness mentioned in the previous section⁸¹. A very good idea regarding desirability of performance could be obtained by analysing the Financial Statement data⁸². Balance Sheet is a very vital document which displays the assets, liabilities and owner's equity position of an industrial unit⁸³. But it has been criticised as a static document which seldom shows the true financial position of an enterprise⁸⁴. The Profit

⁷⁸ Chairman's Speech. Bombay: 33rd Annual General Meeting of Industrial Finance Corporation of India, 1984.

⁷⁹ Habibullah and Mohbub Ahmed. Management Constants of Cooperatives. Dhaka Bureau of Business Research, 1988. pp 35-36.

⁸⁰ Bidoni and Mitra. Opcit. pp. 15-25.

⁸¹ Lev Baruch. Financial Statement Analysis: A New Approach. Englewood Cliffs, N.J.; Prentice Hall Inc., 1974. pp. 134-35.

⁸² W.H. Beavor, M.J. Kennedy and V.M. Voss, "Prediction Ability as a Criteria for Using Accounting Ratios", The Accounting Review. (October, 1968). pp. 210-25.

⁸³ Carlise R. Davis and Edward F. Gee. Analysing Financial Statement. New York. American Institute of Bankers, 1979. pp 54-55

⁸⁴ How to Read a Balan Sheet. Geneva; ILO, 1982, pp 20-25.

and Loss Account or Income Statement is one in which the heart beat (meaning rhythmic inflow and outflow of fund) of a profit earning enterprise can be felt⁸⁵. But when these two documents are examined combinedly, they articulate the financial change that has taken place over a period of time⁸⁶.

Brown and Haward observes that financial statement analysis is a difficult task and a student of accounting must collect a lot of information before arriving at any valid conclusion⁸⁷. This point was further emphasised by Jones who stipulates that an accountant should be able to ascertain the financial position of a company just as a doctor is able to diagnose the physical condition of a patient⁸⁸. Hobbs and Moore further adds that the Financial Statement Analysis is an art rather than science and more additional information should be examined thoroughly to make it pragmatic and interesting⁸⁹. Some of the guidelines as suggested by Jones are as follows :

- (a) Terms of Trade (Domestic and Foreign);
- (b) Government Policy ;
- (c) Limitation of financial indicator
- (d) Abridgement of Financial Statement
- (e) Accounting Policy

⁸⁵ Walter B. Meigs and Rober B. Meigs. Financial Accounting. 3rd ed. New York; McGraw-Hill Book Company, 1979. pp. 609-13.

⁸⁶ Charls H. Gibson and Patricia A. Frishkoff. Financial Statement of Analysis: Using Financial Information. 2nd ed. Boston, Mass; Hunt Publishing Company, 1983. pp. 54-63.

⁸⁷ Lewis J. Brown and Leslie R. Howard. Management Accounting and Finance. 4th ed. London; ELBS Ltd., 1974. pp. 589-92.

⁸⁸ Frank H. Jones. Guide to Company Balance Sheet and Profit and Loss Account. London; Butterworths, 1977. pp. 539-40.

⁸⁹ James B. Hobbs and Carl L. Moore. Financial Accounting: Valuation and Analysis. 3rd ed. Ohio; South Western Publishing Company, 1984. pp. 479-80.

- (f) Window-dressing
- (g) Location of industry
- (h) Operation in more than one industrial sector
- (i) Price fluctuation and inflation
- (j) Suppression of fact from Financial Statement.

In addition to the above information, Jones suggests the following guidelines for the identification of sickness⁹⁰. They are as follows :

- (a) the presence of a secret reserve should be thoroughly examined
- (b) the calibre of management should be evaluated thoroughly
- (c) while ascertaining the value of asstes, such item as Preliminary Expenses, cost of issuing Shares and Debentures and interest on the same should be decutted;
- (d) the financial position of a company should be deemed as sick if very liberal terms are offered to the share-holders;
- (e) it should be ascertained properly whether loans obtained from banks and DFI's are used for the designeted purpose;
- (f) declaration of lavish dividend by the company is a sign of financial weakness;
- (g). diminishing cash balance indicate liquidity crisis and impending financial difficulty.

If after evaluating the performance of the company in the light of above guidelines, it appears that there are definite signs of management weakness, than it would be quite advisable to conduct a thorough Management Audit ⁹¹. Since a deficient

⁹⁰ Frank H. Jones. *Opcit.* pp. 564-70.

⁹¹ A. Sayeed, "Management Audit", The Bangladesh Accountant, Volume XIII, No. 4 (Oct. - Dec., 1989). pp. 45-56.

management is a potential cause of industrial sickness, thus the result of such audit would be very helpful in diagnosing the same.

2.6 Review of Research Work Carried Out in the Field of Industrial Sickness or Corporate Failure :

Extensive research work has been carried out in the above noted field in U.S.A, U.K., Australia, Hong Kong and India which can be broadly classified into Univariate and Multivariate Approach⁸². Under the Univariate Approach, emphasis was placed on individual signal provided by the accounting ratios to predict sickness or failure⁸³. The Multivariate Approach was developed to overcome the demerits of the former approach and favoured the application of few important accounting ratios through the application of Multiple Discriminant Analysis (MDA) Technique⁹⁴.

Between the year 1930-42, several studies on Business Failure were carried out by five authors of American origin⁹⁵.

⁸² Vinod Kumar, "Prediction of Industrial Sickness-Need of the Hour", The Chartered Accountant, (June, 1982). pp. 430-32.

James O. Horrigan, "A Short History of Financial Ratio Analysis", Accounting Review, (April, (1968)). pp. 284-94.

⁸³ M.J. Pinches, "Evidence on the Information Content of Accounting Number: Accounting-based and Market-based Estimation of Systematic Risks", Journal of Quantitative and Financial Analysis Volume 6, No. 2, (June, (1973)). pp. 417-43.

⁹⁴ M.J. Pinches and R.A. Mingio, "A Multivariate Analysis of Industrial Bond Rating," Journal of Finance Volume 28, No. 1, (March, (1973)). pp. 1-18.

D.I. Stevans, "Financial Characteristics of Marged Firms, A Multivariate Approach", Journal of Quantitative and Financial Analysis. Volume 8, No. 1 (March, (1973)). pp. 149-58.

⁹⁵ J.R. Ramser and I.D. Foster, "A Demonstration of Ratio Analysis", Bulletin, No. 4, Urbana, Ill.: University of Illinois Bureau of Business Research, (1931).

A. Winaker and R.F. Smith, "Change in Financial Status of Successful Industrial Companies, Bureau of Business Research", Bulletin No. 50 University of Illinois Press, (1931).

The results of these studies indicated that accounting ratio was very useful in predicting failure/sickness since failed firms had poor ratios as compared to a successful firms. The various ratios as identified by the authors noted above for predicting sickness are : Current Ratio, Quick or Acid-test Ratio, Net Profit to Net Worth Ratio, Net Sales to Net Worth Ratio, Net Sales to total Assets Ratio, Net Working Capital to Total Assets Ratio, Net Income to Net Worth Ratio and Net Worth to Total Debt Ratio.

Beaver ⁹⁶ made a pioneering study on prediction of Corporate Failure in 1966 by applying sophisticated Statistical Techniques and selected accounting ratios. He defines failure as one, "when a firm is defaulting on current payment of debt, overdrawing or declaring bankruptcy". His univariate model of corporate failure comprised of three empirical experiments: (a) comparison of mean values of ratios; (b) Dichotomous classification test and (c) Likelihood of failure analysis. Despite limitations, his study indicated that special attention should be paid towards three elements of Current Assets namely Cash, Accounts Receivable and Inventory. Gibson et al. ⁹⁷ also noted that analyst should be

P.J. Fitzpatrick, "A Comparison of Ratios of successful Industrial Enterprises with those of Failed Firms", Certified Public Accountant, Volume 12, No. 4, (Oct. - Dec., (1932)).

Charls L. Merwin, "Financing Small Corporation the Manufacturing Industries (1926-30)". New York, National Bureau of Economic Research, (1942). pp. 367-85.

R.J. Saulnier, H.G. Hason and N.J. Jacoby. Federal Lending and Loan Insurance. Princeton University Press, 1983. pp. 456-81.

⁹⁶ William H. Beaver, "Financial Ratios as Predictors of Failure", Empirical Research in Accounting: Selected Studies. Journal of Accounting Research Supplement, (1966). pp. 71-111.

_____ "Market Price, Financial Ratio and the Prediction of Failure", Journal of Accounting Research Volume 6, No. 2, (Autuma, (1968)). pp. 79-92.

⁹⁷ Gibson and Frishkoff. Opcit. p. 446.

very alert in case of low Cash and Inventory level and high volume of Accounts Receivable.

However, Professor Altman argues that such approach is likely to come up with faulty results and interpretations may be potentially confusing⁹⁸. As an alternative, he suggested the MDA technique where each of the accounting ratios were assigned a weight on the basis of there significance in predicting the event of sickness⁹⁹. The MDA technique was first of all used by Professor Fisher in 1930 and later on, it was used extensively in biological and behavioural science¹⁰⁰. The technique attempted to derive linear or quadratic combination of characteristics which best discriminates between specific group. It is analogous to Multiple Regression analysis except that dependent variable in the regression analysis takes on continuous values, the dependent variable in the MDA model represents groups or categories¹⁰¹.

A number of research works was carried out by authors like Tanari,¹⁰²; Horrigan,¹⁰³; Blum,¹⁰⁴; Wilcox,¹⁰⁵; Edmister,¹⁰⁶; and

⁹⁸ Edward I. Altman, "Financial Ratios Discriminant Analysis and the Prediction of Corporate Bankruptcy", Journal of Finance, Volume 23, No. 1 (September, (1968)). pp. 589-609.

⁹⁹ Edward I. Altman. *Opcit.* pp. 589-92.

¹⁰⁰ O. Maurice Joy, "On the Financial Application of Discriminant Analysis", Journal of Quantitative and Financial Analysis, Volume 10, No. 1, (Dec., (1975)). pp. 720-39.

¹⁰¹ William S. Peters and Gorge W. Summers. Statistical Analysis for Business Decisions Englewood Cliffs, N.J., Prentice-Hall Inc., (1968). Chapter 17.

William R. Cooley and Paul R. Lohmes. Multivariate Procedure for Behavioral Science. New York, John Wiley and Sons Inc., 1966.

¹⁰² M. Tanari, "Financial Ratios as a Means of Forecasting Bankruptcy", Management International Review, Volume 4, (1966). pp. 15-21.

¹⁰³ James O. Horrigan, "The Determination of Long-term Credit Standing with Financial Ratios", Empirical Research in Accounting Selected Studies. Journal of Accounting Research (Sept., (1966)). pp. 44-50.

Libby¹⁰⁷, on prediction of business failure by using Multivariate Approach. The results of these studies indicated that a small number of selected accounting ratios proved very effective for such purpose. With a view to overcome some limitation of the previous studies, Professor Altman¹⁰⁸ developed a MDA model comprising of five ratios and calculated a composite Z-score. His final MDA model is given below :

$$Z = 0.012X_1 + 0.014X_2 + 0.033X_3 + 0.008X_4 + 0.999X_5$$

where X_1 = Working Capital/Total Assets

This ratio is a measure of the net liquid assets of the firm in relation to total capitalisation;

X_2 = Retained Earnings/Total Assets

This ratio is the measure of the cumulative profitability of the firm;

X_3 = EBIT/Total Assets

This ratio is the measure of the profitability of the firm's assets abstracting from any tax or leverage effect

¹⁰⁴ Marc P. Blum, "Failing Company Discriminant Analysis", Journal of Accounting Research, Volume 12, No.2, (Spring, (1974)). pp. 1-25.

¹⁰⁵ Charles W. Wilcox, "A Simple Theory of Financial Ratio as a Predictor of Failure", Journal of Accounting Research, Volume 9, No. 2, (January, (1971)). pp. 369-75.

¹⁰⁶ Robert O. Edmister, "An Empirical Test of Financial Ratio Analysis of Small Business Failure Prediction", Journal of Financial and Quantitative Analysis, Volume 7, No. 2, (March, (1972)). pp. 1477-90.

¹⁰⁷ R. Libby, "Accounting Ratio and Prediction of Failure: Some Behavioral Evidence", Journal of Accounting Records, (Spring, (1975)).

¹⁰⁸ Edward I. Altman, "Financial Ratio Discriminant Analysis and the Prediction of Corporate Bankruptcy"; Journal of Finance Volume 23, No. 4, (Sept., (1968)). pp. 589-609.

X_4 = Market Value of Equity/Book Value of Total Debt.

This ratio measures how much the firm's assets can decline before the liabilities exceed the assets and the firm becomes insolvent

X_5 = Sales/Total Assets. ✓

Z = Discriminant Score (Overall value) ✓

He concluded that a Z-score of 2.675 was the best cut-off point which contained minimum of misclassification error (Appendix F). This model successfully predicted failure with 95 percent accuracy within one year data before bankruptcy and the accuracy level dropped to 36 percent when five years data was used. In another study, Altman developed an improved version of Z-score and concluded that failure could be predicted in a much better way than the earlier model¹⁰⁹. Some of the other authors who carried out research using this approach are Baruch¹¹⁰, Aharony and Swary,¹¹¹; Argenti¹¹² and Walker,¹¹³ and their findings were significant enough.

¹⁰⁹ Edward I. Altman, Robert G. Haldeman's & P. Norayanan, "Zeta Analysis; A New Model to Identify Bankruptcy Risk of Corporation; Journal of Banking and Finance, Volume 10, No. 1, (June, (1977)). pp. 80-105.

¹¹⁰ Baruch Lev, "Financial Failure and Information Decomposition Measure", Accounting in Practice: Contribution to Accounting Thought by other Discipline. (ed.) R.R. Sterling and W. F. Benz. South Western Publishing Company, (1977). pp. 103-11.

¹¹¹ James Aharony, Charles P. James and Itzhak Swari, "An Analysis of Risk and Return characteristics of Corporate Bankruptcy using Capital Market Data", Journal of Finance Vol. 35, No. 1, (Sept., (1980)). pp. 1001-17.

¹¹² John Argenti, "Company Failure-Long-Range Planning Not Enough", Accountancy (August, (1977)). pp. 40-52.

¹¹³ M.C. Walker, J.D. Stowe, and S. Mariatry, "Decomposition Analysis of Financial Statement", Journal of Business and Accounting (Summer, (1979)). pp. 173-86.

In the Indian context, a number of studies were carried out to predict industrial sickness. Kaveri¹¹⁴ attempted to predict corporate health by using financial ratios as a predictor variable. He used the MDA technique to assign the sample units into any one of the group namely good, irregular and bad. The accuracy of prediction was found to be 78 percent in the initial sample and 69 percent in the held out sample for one year before the event. The MDA technique was again used by Chatterjee and Roy;¹¹⁵ NCAER,¹¹⁶ Rao and Sarma;¹¹⁷ Bhattacharya and Pande¹¹⁸ and Sattanarayana¹¹⁹ and findings were quite important. Gupta¹²⁰ carried out an enteresting study on prediction of Industrial Sickness in India using the concept of Marginal Theory of Firm. He found the following ratios to be very effective for prediction of Industrial Sickness:

- a. Earning Before Depreciation, Interest and Taxes (EBDIT) to sales
- b. Operating Cash Flow (OCF) to sales

¹¹⁴ V.S. Kaveri. Financial Ratio as Predictor of Corporate Health. New Delhi; S. Chand and Sons, (1980). pp. 130-45.

¹¹⁵ S. Chatterjee and S. Roy, "Forecasting Sickness - A Quantitative Approach", 20th All-India Cost Conference, Calcutta; (Jan, 1978).

¹¹⁶ NCAER, "A Study on Industrial Sickness", (1979).

¹¹⁷ L.V. Sharma and G.D. Rao, "Financial Ratios as Predictor of Failure - A Multivariate Approach", Indian Manager, Volume 7, No. 1, (June, (1976)). pp. 110-15.

¹¹⁸ C.D. Bhattacharya and K.M. Pande, "Corporate Financial Strength - Application of Discriminant Analysis", Jodhpur Management Review. Faculty of Commerce, University of Jodhpur, Volume - 3. pp. 25-26.

¹¹⁹ S.V. Sattyanarayan, "An Emperical Model to Credit Corporate Sickness", in Industrial Sickness and Revival in India, (1980). pp. 201-220.

¹²⁰ L.C. Gupta, Financial Ratios for Monitoring Corporate Sickness: A New Approach. New Delhi, Oxford University Press, (1983). Chapter 3.

- c. EBDIT to Total Assets
- d. OCF to Total Assets
- e. EBDIT to Interest + 0.25 (Debt).

Srivastava¹²¹ in one of his study developed a linear discriminant function comprising of five financial ratios, one technical and one operational ratio which successfully discriminated between healthy and sick companies. The various ratios were Net Worth/Total Assets; Net Block/Net Worth; Net Profit/Total Assets; Total Liabilities/Net Worth; Current Assets/Current Liabilities; Plant Utilization and Capacity Utilization. This model achieved 100 percent predictive accuracy at 1.0 percent level of significance.

As far as Bangladesh is concerned, indepth research work on the problem industrial sickness appeared to be scanty. Most of the seminar papers, articles etc., written on the topic were very limited in scope. Two teachers of Rajshahi University have done some research work relating to Industrial Sickness in Bangladesh. They used nine accounting ratios to throw some light on the various aspects of Industrial Sickness. But the scope of the study was very limited.¹²² Mr. Rahman¹²³ wrote a conference paper in which he attempted to identify some leading causes of Industrial Sickness in Bangladesh and called for its early solution. In another paper, he expressed the view that jute

¹²¹ S.S. Srivastava, "Design and Development of Information System for Development Bank: A System Approach", Second IFIC Lecture. Faculty of Management Studies, University of Delhi, (Feb., (1981)). pp. 11-17.

¹²² A.C. Saha and M.M. Das, "Some Aspects of Industrial Sickness in the Selected Private Sector Industries in Rajshahi District", (Unpublished).

¹²³ M. Rahman, "Industrial Sickness", Accountants in the 1990's. Dhaka; ICMA and ICAB Conference, (Jan. 16-17, (1991)).

industries are becoming sick due to 'market imperfection' prevailing in the economy¹²⁴. Sen¹²⁵ in one of his paper, examined the problem of Industrial Sickness in Bangladesh and identified some causes which were responsible for the malady. But his findings were based on secondary data. Jahanara Begum¹²⁶ also tried to draw the attention of all concerned to the problem of Industrial Sickness and identified some causes. But again it was based on secondary data. Professor Huq¹²⁷ of IBA also carried out study on the problem of Industrial Sickness in Bangladesh. He was of the view that management in efficiency was the root causes of Industrial Sickness in Bangladesh. Mahmood and Bhattacharoya¹²⁸ also carried out a study in Bangladesh for the purpose of predicting Industrial Sickness by using selected financial ratios. Their sample comprised of nine industrial units belonging to Bangladesh Chemical Industries Corporation (BCIC) and the Altman's Z-score was employed for all the selected industrial enterprises. Financial Ratios like Return on Capital Employed (ROCE); Assets Turnover and Net Profit Margin was also computed for all of them. The result of the study showed that the financial ratios and the Z-score had considerable predictive value. However, it was based on small sample and secondary data.

124 -----, "Jute Industries in Bangladesh: A Sick Sector or Symptom of Market Imperfection", The Bangladesh Accountant. (April-June, (1990)).

125 D.K. Sen, "A Brief Study on Industrial Sickness in Bangladesh", The Bangladesh Accountant Volume 12, No. 4, (Oct. - Dec., (1989)). pp. 33-44.

126 J. Begum, "Sick Industries in Bangladesh: Causes and Suggested Remedies", The Bangladesh Journal of Political Economy.

127 M. S. Huq, "Industries in Problem", The Bangladesh Observer. Dhaka; (June 24, (1989)). p. 3, Col. 3-6.

128 M. Mahmood & K. Bhattacharya, "Ratios as Predictor of Financial Health", Bangladesh J. of Political Economy 9(2)469-81.

2.7 Some Theoretical Aspects of Financial Statement and its Role in Diagnosing Industrial Sickness

From the title of the dissertation, it should be quite apparent that the main objective of the study is to examine the usefulness of Financial Statement data and ratios computed from the same in detecting the underlying causes of Industrial sickness, the following paragraphs purports to discuss the various Financial statements and their relevance to the problem under investigation.

To begin with, Hermanson et al. defines a Financial statement as follows :

"Statements and foot-notes related thereto which purports to show the financial position relating to a point of time or change in financial position relating to a point of time and such other statements prepared according to cash or other incomplete basis of accounting."

It may be further added here that indirect financial data contained in a management advisory service report to support a recommendation to a client, Tax Returns or supporting sales schedule etc. are not included under the term Financial Statement. Similarly, the statement affidavit and signature of the preparer required in the returns neither constitute an opinion regarding the financial condition nor require a disclosure of such opinion¹²⁹. Financial Statement is indeed a very valuable reporting mechanism which are prepared on an yearly basis by the corporate bodies like Private Limited Companies and

¹²⁹ Roger H. Hermanson, Stephen Loch and Robert H. Strawsser. Accounting Theory and Practice, 3rd ed. (Homewood, Ill: Richard D. Irwin Inc. (1983). p. 64.

Public Limited Companies¹³⁰. These statements presents analysis of the resource^s of the organisation and the flow of goods, money and services into the same. The various objectives of preparing Financial Statements are:

- (a) To determine the short-term and long-term financial condition of an industrial organisation;
- (b) to analyse the manner in which resources are being used;
- (c) to determine the liquidity of the organisation;
- (d) to ascertain the profitability of an organisation over a period of time.

Financial Statement comprises of the following :

- (a) Balance sheet
- (b) Statement of Income (Profit and Loss Account)
- (c) Statement of Retained Earnings (Profit and Loss Appropriation Account).
- (d) Statement of Change in Financial Position (SCFP) (Cash Flow Statement or Statement of Sources and Application of Fund^s)¹³¹.

As far as Bangladesh is concerned where the provisions of

¹³⁰ Companies Act. 1913 (VII of 1913). Karachi Manager of Publication, Government of Pakistan, (1965).

¹³¹ Sylvan D. Schwartzman and Richard E. Ball. Elements of Financial Analysis. New York: De Van Nostard Company, (1977). pp. 1-2.

Peyton Foster Roden and George H. Christy. Finance: Environment and Decuam. 4th ed. New York: Harper and Row Publishers, (1986). pp. 227-28.

M. Frue and P.K. Moutz. "Financial Reporting - By Whom". Harvard Business Review (March, April 1975. pp. 6-21.

Companies Act, 1913 are in operation, the term "Financial statement" refers to the statements mentioned in (a-c). The fourth statement namely SCFP is not a requirement in case of companies operating in Bangladesh. Therefore the first three statements would be deemed as financial statements for the present study.

A details discussion each of the components of the aforesaid financial statement is given below :

Balance Sheet

A Balance Sheet may be defined as a tabular statement or summary of balance (debit and credit) carried forward after an actual constructive closing of books of accounts kept according to principles of accounting¹³². From an analytical point of view, the definition as suggested by Bouver's Law Dictionary is worthy of consideration. It reads as follows :

"A statement made by traders and other to show the status of a particular business. The Balance Sheet should exhibit all the balances of debit and credit, also the value of the merchandise and results of the whole"¹³³.

An accountant views a Balance Sheet as a statement comprising of three sections namely Assets section, Liabilities section and

¹³² Paul Grady. Inventory of Generally Accepted Accounting Principles for Business Enterprises. New York, American Institute of Certified Public Accountants Inc. (1965). p. 226.

¹³³ Ibid. p. 227.

Capital or Proprietary section¹³⁴. A Balance Sheet may also be defined as the snap shot of the financial condition of a going concern which summarises the uses to which the business has put its fund on the one hand and the financing method applied on the other at a given point of time¹³⁵.

However, this statement has been criticised on the ground that it is a past history by the time it reaches the hands of the analyst and hardly depicts the true financial position of an industrial concern. In spite of these limitations, it is a very useful document when certain assumption hold good¹³⁶.

Income Statement

This is another important financial statement. Meigs et al. observes that the heart-best of a profit making enterprise is reflected in the pulsing rhythm of the operating cycle. A business obtains cash from various sources and invests the same in operations or inventories. These inventories in turn are sold to the customers either on cash or credit basis. When the customers pay cash, the company obtains enough cash and begins a fresh operating cycle¹³⁷.

¹³⁴ Ibid. P. 227.

Curlisle R. Davis and Edward F. Gee. Analysis Financial Statement. New York: American Institute of Bankers, (1969). pp. 54-55.

Michaul H. Granof. Financial Accounting: Principles and Issues. Englewood Cliffs, N.J. Prentice-Hall Inc. (1977). p. 2.

¹³⁵ Karl Y. Moore and Robert K. Jaediake. Management Accounting, Dallas, Texas: South-Wilson Public Co. (1967). p. 11.

¹³⁶ Bian B. Haward and Miller Upton, Introduction Business Finance. New York: McGraw-Hill Book Company (1953). p. 129.

¹³⁷ Walter B. Meigs and Robert F. Meigs. Financial Accounting. 3rd ed. New ork: McGraw-Hill Book Co. (1979). p. 603

The Income Statement shows the growth in the amount of revenue as a result of operation. In a sense, the face of an industrial organisation is read in the Income Statement since it tells whether revenue is small or large enough any given period of time than the cost of resources used in generating the income¹³⁸. This statement is also known as Statement of Income and Expenses, Profit and Loss Account or a Dynamic or Operating statement. Here the inflow of assets resulting from provision of goods and services to customers is recorded in the revenue account. The outflow of assets is identified with the products and services provided by creditors and suppliers is similarly recorded in expense account. The increase or decrease assets resulting from the above activities, that is, the difference between income and expenditure which is designated as Net Profit. The net increase in net assets is added to the owners equity in the Balance sheet and net decrease in net assets is likewise deducted from the owners equity¹³⁹. Some of the important items appearing in an Income Statement are :

Gross Profit Section

1. Gross sales
2. Returns or Allowances
3. Net Sales
4. Cost of Goods sold
5. Gross Income.

¹³⁸ Ibid. p. 603.

¹³⁹ Moore and Jaedicke. *Op cit.* pp. 11-12.

Operating Profit Section

1. Administrative and General Expenses
2. Factory Overhead expenses
3. Provision for Bad Debt
4. Selling and Distribution expenses
5. Operating profit.

Net Profit or Loss Section

1. Cash discount received and given
2. Interest paid
3. Net Profit or Loss before outstanding charges.
4. Extraordinary charges
5. Income Tax
6. Net Profit or Loss
7. Net profit or loss after adjustment by carrying back or carrying forward the tax relief¹⁴⁰.

It may be added here that Balance Sheet and Income Statement taken separately are not revealing enough but when they are combined into a single whole, they interlock or articulate the financial change that has taken place in the business. They also enable us to learn much about the financial strength or weakness of a business concern¹⁴¹.

Statement of Retained Earnings

Retained Earnings represents the sum of the earnings of each accounting period during which the company has been in existence

¹⁴⁰ Roy A. Foulk, Practical Financial Statement Analysis. 6th ed. New Delhi: McGraw-Hill Book Co. Ltd. (1979). pp. 500-501.

¹⁴¹ Charles H. Gibson and Patricia A. Frishkoff. Financial Statement Analysis: Using Financial Accounting Information. 2nd ed. Boston Mass: Hunt Publishing Company (1983). pp. 54-65.

less the amount paid as dividend to shareholders¹⁴². The retained earning concept as it appears in a Balance sheet may be shown in the following form :

Statement of Retained Earning

Retained Earning (Opening balance)	*****
(+) Income during the current period	*****

(-) Dividend declare during the period	*****

Retained Earning at the year end	*****

It may be added here that retained earning do not represent tangible resources of the firm and hence cannot be divided among the shareholders. At the same time, it cannot be used in purchasing goods and services. The statement of Retained Earning is also known as Profit and Loss Appropriation Account. This Statement also shows some adjustments or appropriations of the previous or current period¹⁴³.

It has been found that the form of preparing Statement of Retained Earning varies widely. Some prefer to combine the amount of Income Statement and Statement of Retained Earning in a single statement thereby eliminating separate statement for retained earning. Some of the other companies divide the statement into appropriated and unappropriated section and set forth the increase or decrease in earning that takes place during the year¹⁴⁴. These two practices have received mixed reaction from

¹⁴² Granof, M.H. Opcit. pp. 38-39.

¹⁴³ Gebson and Frishkoff. Opcit. pp. 41-42.

¹⁴⁴ Ezra Solomon and John J. Pringle. An Introduction to Financial Management. New Delhi: Prentice-Hall of India Private Limited (1978). pp. 693-94.

the accountants. The main advantage of the combined approach is that all items affecting retained earning are shown in the same statement and is less likely to be overlooked by statement users. However, some of the accountants felt that combined approach simply downplays the importance of retained earning by burying it in the midst of other less important data¹⁴⁵. Hence it is advisable to prepare a separate Statement for Retained Earning.

2.8 Inadequacies of the Financial Statements Prepared by Companies Operating in Bangladesh

It is quite evident by now that the focal point of our study are the financial data contained in the Financial Statements (Annual Account Report) of the sample industrial undertakings. The necessary accounting ratios were calculated by using the financial data as displayed in given Profit and Loss Account and Balance sheet of the respective industrial units. But it may be added here that these financial data lacks accuracy and objectivity. The inadequacies of these financial data were highlighted through the study conducted by Ahmed¹⁴⁶ and Parry and Khan¹⁴⁷. Pointing towards these limitations, one another compared it with a "modern bikini" adding "what it reveals is interesting but with it hides is vital"¹⁴⁸. It was also mentioned in the

145 Ibid. p. 694.

146 Mahbub Ahmed. Evaluation of Financial Statement as a Communication Device in Bangladesh. Dhaka: The Institute of Chartered Accountants of Bangladesh, (1982). pp. 110-115.

147 Michael Parry and Ferdous Khan. A Survey of Published Accounts in Bangladesh. Dhaka: Institute of Chartered Accountants of Bangladesh and U.N. Department of Technical Co-operation for Development, (June 1984). pp. 135-150.

148 Ahmed, Mahbub. Opcit. p. 113.

foregoing study that financial statements do not represent the true and fair view of the financial condition of an enterprise as they are mostly dressed-up and cosmeticised. In this connection Dr. Ahmed observes as follows, "Experience with corporate accounting suggests that there is no truth in accounting. Accounting is one what one wants it to be. Figures can be manipulated for good or evil. If the standard is unacceptable and inflexible, than circumvention becomes the answer¹⁴⁹.

It should not be construed over here that prevailing irregularities and limitations of the financial statements are unique in case of Bangladesh alone. The same irregularities have been observed in matured economies like U.K., U.S.A etc¹⁵⁰.

It is specially true in case of U.K. where an Unlisted Securities Market (USM) has been floated to give the steel companies an access to the capital market where less tidy in preparing and submitting the financial statement¹⁵¹.

Under such circumstances, the financial data are of no help in empirical research work. To overcome this limitation, Professor Argenti suggested a non-financial approach towards diagnosing the causes of corporate sickness and failure. The practical application of this approach was demonstrated through

149 Ibid. p. 120.

150 P. Hutchinson, L. Meric and G. Meric, "Financial Characteristics of Firms which Achieved Quotation in the U.K. Unlisted Securities Market", Journal of Business, Finance and Accounting. Vol. 15, No. 1, (Spring 1988). pp. 9-19.

151 Ibid. pp. 20-22.

the research work carried out by Keasy and Watson¹⁵².

While substantiating his point, Argenti argued that a failing or sick companies passes a dominant director and a large number of directors leave the company as failure approaches¹⁵³. Recent research by Carsberg et al. has shown that sick companies do not have definite Accounting Information System except rudimentary ones. They take all management decisions based on historical accounting information which are mostly unreliable¹⁵⁴. Whitred and Zimmer has shown through their research that sick companies require long time in preparing and submitting the audited accounts report as their bookkeeping records are inadequate and inconsistent¹⁵⁵. Argenti further adds that a sick company attempts to hide the poor financial position from creditors and shareholders through "creative accounting". He observes as follows :

"I have come to believe that the phenomenon is associated with failure. We have found crative accounting in the twenty-second largest company in England and the sixth largest in America. I suggest that it is one of the most reliable of all symptoms¹⁵⁶.

152 J. Keasy and R. Watson, "Non-Financial Information and the Prediction of Small Company Failure: A test of Argenti's Hypothesis, Journal of Business Finance and Accounting. Vol. 14, No. 3, (Autumn 1987). pp. 336-37.

153 John Argenti. Corporate Collapse: Causes and Symptom. London, McGraw-Hill Company (U.K. Ltd. (1976). p. 143.

154 B.V. Carsberg et al. Small Company Financial Reporting. Englewood Cliffs. N.J. Prentice-Hall Inc., (1985). pp. 125-35.

155 G.P. Whitred and I. Zimmer, "The Timeliness of Financial Reporting and Financial Distress" The Accounting Review. (April 1984). pp. 262-78.

156 John Argenti. Opcit. P. 136.

According to Schwartz and Menon, a failing or sick company is most likely to switch over to new auditors on a frequent occasion¹⁵⁷. Argenti also believed that a sick company tends to be highly geared i.e. it uses more credit fund than its own equity. When it fails to cover the fixed-interest charges through higher earning, this method of financing makes it more vulnerable to adverse economic trend¹⁵⁸. He further adds, "A high gearing and economic turndown are the two classic nutcrackers of failure. In the opinion of Argenti, the age of a company is also an important determinant of corporate failure or sickness and hence it was duly considered¹⁵⁹ in the present study. In all a total of 18 non-financial information were selected for our study and analysis. (For details see Appendix 9).

2.9 Selection of Ratios for the Study

The foregoing discussion makes it quite apparent that accounting ratios are an important tool of financial statement analysis. A ratio can be computed by dividing one number by another where the diviser is the base and the quotient is the ratio.¹⁶⁰ Brown et al. is of the opinion that these ratios are not exact enough to form an opinion regarding sickness and hence

¹⁵⁷ K.B. Schwartz and K. Menon. "Auditor Switching by Failing Firm", The Accounting Review, (April 1985). pp. 375-88.

¹⁵⁸ K. Keasy and R. Watson. *Opcit.* p. 340.

¹⁵⁹ *Ibid.* p. 341.

¹⁶⁰ C.S. Devarell. Management Techniques in Administration and Finance: Aid to Decision Making. London; Gee and Company Ltd., (1976). pp. 175-80.

should be used in conjunction with other information¹⁶¹. A number of authors have also advocated the use of a smaller number of ratios for prediction and diagnosis of sickness¹⁶². The following table summarises the various ratios used by researchers for such purpose:

Table 2.2: Summary of Accounting Ratios used by researchers

Name of Researchers	Country of Origin	Year of Study	Objective	No. of Ratios Used
Winaker & Smith	USA	1935	Business Failure	21
W.H. Beaver	USA	1966	Corporate Failure	30
E.I. Altman	USA	1968	Corporate Bankruptcy	22
E. Deakin	USA	1970	Corporate Failure	14
Moyer et al.	USA	1970	Bank Failure	32
R. Edmister	USA	1972	Business Failure	19
M. Blum	USA	1974	Do	12
Delton Chesser	USA	1974	Prediction of Failure	05
Pinches et al.	USA	1975	Corporate Failure	48
Johnson	USA	1978	Do	61
Taffler et al.	UK	1979	Do	80
C.R. Laurent	Hongkong	1974	Do	45
Rao & Sharma	India	1976	Industrial Sickness	05

(Continued)

¹⁶¹ L.J. Brown and R. Howard. Principles and Practice of Management Accounting, 2nd ed. London; Macdonald and Evans Ltd., (1969). pp. 488-90.

¹⁶² Harry G. Guthman. Analysis of Financial Statement, 4th ed. New Delhi; Prentice-Hall of India Private Ltd., (1978). pp. 249-62.

L.C. Gupta	India	1979	Industrial Sickness	56
V.S. Kaveri	India	1980	Tradiction of Corporate Health	22
S.S. Srivastava	India	1981	Industrial Sickness	05
P.J. Booth	Australia	1981	Prediction of Corporate FAilure	20

It appears from the table that accounting ratios are an important tool of diagnosing sickness and increased emphasis is being placed on a smaller number of such ratios. But Barnes¹⁶³ criticises the extensive application of accounting ratios for prediction of corporate sicknes. He further adds that ratios by themselves cannot describe a dynamic system like corporate failure. Johnson¹⁶⁴ stipulates that for the purpose of drawing an analogy in the reverse direction, i.e., from ratios to failure, it would be necessary to establish that certain ratio values signify failure or non-failure. This requires a model to link ratio values to these two groups. One such model has been developed by Taffler¹⁶⁵ which may be regarded as the latest version of Z-score. The model is given below :

$$Z = C_0 + (EBIT/CL)C_1 + (CA/TL)C_2 + (CL/TA)C_3 + (NCI)C_4$$

¹⁶³ P. Barnes, "The Analysis and Use of Financial Ratios: A Review Article", Journal of Business Finance and Accounting Volume 14, No. 4, (Winter, (1987)). pp. 449-62.

¹⁶⁴ W.B. Johnson, "The Cross Sectional Stability of Financial Pattern", Journal of Business, Finance and Accounting. Vol. 5, No. 2 (Summer, (1978)). pp. 207-214.

¹⁶⁵ R.J. Tafler, "Forecasting Company Failure in U.J. Using Descriminant Analysis and Financial Ratio Data, Journal of the Royal Statistical Society A145, Part 3 (1982). pp. 342-58.

Where C_0 = a constant which measures the distance between a failed and non-failed firm.

EBIT = Earning Before Interest *and Tax*

CL = Current Liabilities

CA = Current Assets

TL = Total Liabilities

TA = Total Assets

$$\text{NCI} = \text{No Credit Interval} = \frac{\text{Defensive Assets} - \text{CL}}{\text{Total Operating Exp.}}$$

The values of weight assigned to each ratio are:

$$\begin{array}{ll} C_1 = 0.53 & C_3 = 0.13 \\ C_2 = 0.13 & C_4 = 0.18 \end{array}$$

A score of $Z = -1.95$ was found to be the best cut-off point which could successfully discriminate between failed and non-failed firm. A firm having a score below the prescribed cut-off point showed greater propensity of becoming sick.

2.10 BANGLADESH SCENARIO

From the above discussion, it is quite apparent that the various researchers have significantly contributed towards ratio analysis by making it more improved and efficient. In Bangladesh, there has not been any significant development in this respect. The present study sought to make-up this deficiency through introduction of ratio analysis (both Univariate and Multivariate). Under Univariate Approach, a total of twenty four

accounting ratios have been selected for analysis whose relevance to the problem under study has been emply demonstrated through the research work carried out by Banerjee, Betts and Belhoul, Srivastava and L.C. Gupta. Under Multivariate Approach, MDA model as suggested by Altman and Taffler was used. To the best of knowledge of the researcher, no study on prediction of Industrial Sickness in Bangladesh was carried out by making such extensive use of accounting ratios. The author has attempted to verify the usefulness of accounting ratios in predicting Industrial Sickness in Bangladesh context and the results were very encouraging. Thus it may be regarded as his original contribution to knowledge.

2.11 CHAPTER SUMMARY

An industrial unit operates within a dynamic environment which is full of risk and uncertainty. As a result, it may develop sickness at any point of its life cycles. A given industrial unit may be deemed as sick which has incurred cash loss for three consecutive years, its Net Worth has been reduced by 50 percent and it has become totally dependent on external financial help for survival.

In Bangladesh, sickness in industry has become a matter of grave concern in view of poor resources and disappointing economic performance. The industrial sector is virtually gasping for breath and the financial sector is incomplete doldrum in the face of alarming volume of outstanding loan and increasing number of sick industrial unit.

An industrial undertaking may become sick due to internal and external factor or a complex interplay of both of them. Again they may be born sick, made sick or sickness may be thrust upon them. At the early stage, some specific symptom of sickness become~~s~~ apparent which must be diagnosed properly. The various financial and accounting data, if regularly prepared, can become a very useful tool for diagnosing sickness. Empirical research has shown that accounting ratios can serve as an useful tool of diagnosing and predicting sickness. Timely and precise identification of sickness is of crucial importance in this respect.

In this particular study, a modest attempt was made to examine the utility of the accounting ratios (Univariate and Multi-variate Approach) for analysing the causes of Industrial Sickness in Bangladesh. This was again supplemented with non-financial information and expert opinion survey.

CHAPTER III

METHODOLOGY

3.1 INTRODUCTION :

The methodology followed for collecting the necessary data and other information regarding the problem of Industrial Sickness in Bangladesh comprised of the following :

- (a) Literature Survey
- (b) Pilot Survey
- (c) Primary investigation in BSB
- (d) Primary investigation in the selected industrial units which constituted the population of the study.

Each of these steps are discussed as follows :-

(a) **The Literature Survey** was carried out to be acquainted with text books, journals, papers, research work, Government publications, magazines and other published materials on the subject of Industrial Sickness. For this purpose, the researcher visited the libraries at University of Dhaka, Institute of Business Administration (IBA), Institute of Cost and Management Accountants of Bangladesh (ICMAB), Institute of Chartered Accountants of Bangladesh (OCAB), BSB, Bangladesh Institute of Bank Management (BIBM), World Bank, Bangladesh Bank, United Nations Information Centre Library, Public Library, Public Administration Training Complex (PATC) and the like.

(b) **Pilot Survey** : In order to pinpoint the underlying causes behind the poor and unsatisfactory operating result thereby

leading to sickness in the selected industrial units, a small Pilot Survey was conducted in the Dholai Khal and Zingira Area on a small scale. The sample of this survey comprised of 20 small scale industrial units (10 small Engineering Workshops 10 garments manufacturing units). Each of these units were asked to fill in a questionnaire regarding problems and constraints in running the affairs of their enterprises.

The questions were in four-point scale and the answers were designated as Major Problem, Moderate Problem, Minor Problem and Insignificant Problem. The full particulars of questionnaire and the results of the survey is given at the end of this chapter.

The results of the pilot survey fully matched with the findings of a Bangladesh Small and Cottage Industries Corporation (BSCIC) Survey conducted in the Dholai Khal and Zingira Areas. Some of the problems as identified by the BSCIC Survey are Low capacity utilization, shortage of raw materials, shortage of skilled labour, marketing problem, technical problem and management problem.

(c) **Investigation** in the office of BSB involved perusal of official document relating to loan application, loan granting procedure, loan disbursement, project evaluation, Inspection and follow-up work of the End Use Department and the Long Form Audit Report¹.

¹ Long-Form Audit Report. Dhaka : Central Accounts Department, Head Office, BSB. Prepared by S.F. Ahmed & Co. and Rahman, Rahman & Co., Chartered Accountants (June 30, 1985).

Long-Form Audit Report. Dhaka: Central Accounts Department, Head Office, BSB. Prepared by Aknabib & Co. and Quasem, Karim, Quader, Chartered Accounts. (June 30, (1986)).

(d) Investigation in the selected industrial units involved collection of the Annual Accounts Report (Trading Account, Profit and Loss Account or Income Statement and Balance Sheet). Auditor's Report, Director's Report, interview with the Managing Directors (MD's) and Chief Executive (CE). The Annual Accounts Report represents Financial Statement for the present research. The financial data were collected for a maximum of five years and minimum of three years.

3.2 Time Period Covered by the Study :

The study covered a period of five years and the necessary financial data was collected regarding the sample industrial units from 1984 upto 1988 both dates included. The research work was officially launched on December 9, 1987. The preliminary ground work was started from the middle of 1987.

3.3 Population of the Study :

The population of the study comprised of BSB-financed industrial units in Bangladesh. This DFI was established on 1972 for the purpose of fostering the growth of industry in the country. But BSB was rendered incapable of discharging its function in the wake of huge volume of outstanding loan and

These Audit Report has been prepared by the aforesaid Chartered Accountants firm from the published accounts of Bangladesh Shilpa Bank as required by the international Lending Agencies like World Bank, International Monetary Fund, Asian Development Bank etc. These figures are used by the Head Office of the donor agencies for analysis and comparison of the rate or status of financial performance of the creditors in various parts of the world.

increasing number of sick industrial projects². At this stage, the donor agencies like World Bank, International Monetary Fund (IMF), Asia a Development Bank (ADB) asked BSB to prepare a Long Form Audit Report. This report was used by the donor agencies for the purpose of evaluating the loan disbursement programme of BSB.

Thus for the purpose of selecting the population of the study in an authentic and reliable manner, the researcher collected the aforesaid reports for the year 1985 and 1986. This report showed the name of the industrial unit, the volume of outstanding loan including principal and interest and other information. The industrial units covered by the report was again categorised as follows :

- (a) Companies operating at loss.
- (b) Companies operating at profit.
- (c) Companies under construction.
- (d) Companies under litigation.
- (e) Companies under Government control.

After a close examination of the industrial units belonging to the above categories, group A and Group B companies were selected as the population of the study. The remaining groups were excluded from the perview of the study as they did not

² M. Serajul Hoque. "Financing Policy, Procedure and Operations of Development Financial Institution of Bangladesh", paper presented at the Seminar on Development Financial Institution of Bangladesh. Dhaka: German Cultural Centre (December, 18-20, 1991).

fulfill the "Going Concern" concept³. Besides this, Group C companies could not commence commercial production and hence would not be able to provide financial data. The group D companies were already entangled in legal suit with BSB on the issue of outstanding loan and hence were not expected to furnish the financial data and information sought. In the same way, the group E companies were excluded from the scope of this study since their financial problems were being taken care of by the Government of Bangladesh (GOB).

As a matter of policy, BSB provided project loan to 18 industrial sub-sectors out of which the following six subsectors were selected for the study. They are :

1. Textile
2. Chemicals and Pharmaceuticals
3. Electrical Goods
4. Paper Products
5. Food
6. Cold Storage.

One rational behind choosing the above noted industrial sub-sectors was that they are suggested as sick by the survey

³ An enterprise is normally regarded as a "Going Concern", that is, as continuing in operation for the foreseeable future. In practice, the Profit and Loss Account and Balance Sheet are prepared on the assumption that the enterprise has neither the intention nor the necessity of liquidation or curtailing the scale of operation. The Income Tax Act 1922 and Companies Act 1913 fully endorses this concept in the preparation of accounts. (Source : Salma Karim. "Basic Accounting Principles and Applications", The Bangladesh Accountant. XII. No. 2 (April-June, (1989))p.69.

conducted by House of Consultants (HCL)⁴ and 67 percent of the project loan disbursed by BSB was lying blocked in these sub-sectors⁵. It may be noted here that a much larger number of sub-sectors could not be selected for the study in view of the limitation of time. The entire cost of the study had to be met from personal saving and hence the researcher was compelled to concentrate on limited number of industrial sub-sector.

3.4 Selection of Sample and Sample Size :

With a view to select a representative number of industrial units belonging to the above noted sub-sectors, the Long Form Audit Report for the year 1985 and 1986 was thoroughly examined and the derived information was presented in a table which is given below :

Table 3:1 Population of the Study

Industrial sub-sector	Group A Companies	Group B Companies	Total
1. Textile	113	07	120
2. Chemicals	25	26	51
3. Electrical	10	10	20
4. Paper Products	19	17	36
5. Food	25	39	64
6. Cold Storage	52	47	99
	244	146	390

⁴ An Analysis of the Causes of Sickness and Suggestion for Improvement Dhaka: House of Consultants Ltd. (Nov. (1989)).

⁵ A.K.M. Shahadat Ali et al. "Aspects of Development Institutions in Bangladesh", Report presented at the seminar on Economic and Management Problems of Development Banking. Dhaka: Bangladesh Economic Association, (April 12, 1987).

Here it is evident that there was in all 390 industrial units in the population out of which 244 belonged Group A (Profitable) and the remaining belonged to Group B (Losing). As a standard sampling procedure, the sample is usually kept at a minimum of 10 percent of the population keeping in view the limited time and resources available at the disposal of researcher and other factors such as absence, refusal or non-cooperation of the respondent. As far as the technique of random sampling is concerned, it would not be feasible enough because of the complicated nature of the problem of Industrial Sickness. In order to overcome the problem of sampling, Kalton and Mosor⁶ recommended the use of the technique of Stratified Sampling. In view of the problems already mentioned, an ideal sample size of 40 industrial units was decided upon. Based upon the total population of 390 industrial units and a sample size of 40 industrial units, the overall sample fraction⁷ was calculated as follows :

$$\begin{aligned} \text{Sample Fraction} &= \frac{\text{Projected Sample Size}}{\text{Total Population}} \\ &= \frac{40}{390} = 1/9.75 \end{aligned}$$

Next, the sample fraction of 1/9.75 was used to convert all the stratum population into possible number of interviews to be conducted. This would also give us the total sample size of 40

⁶ Sir Claus Moser and Graham Kalton. Survey Methods in Social Investigation. 2nd ed. London : English Language Book Society and Heinmann Educational Book, (1980) pp. 188-210.

⁷ Ibid. pp. 191-92.

spread over six industrial subsectors. ✓

The following table presents the information :

Table 3.2 : Sample Size and its Distribution Between Group A and B Companies

Stream of Industry	Group A Sample	Group B Sample	Total Sample
1. Textile	11.58	0.72	12.30
2. Chemical	2.56	2.67	5.23
3. Electrical	1.025	1.025	2.05
4. Paper Products	1.945	1.745	3.69
5. Food	2.56	4.00	6.56
6. Cold Storage	5.33	4.82	10.15
	-----	-----	-----
	25.00	14.98	39.98

It may be noted here that sample size of 40 which is roughly 10 percent of the total population appears to be a normal practice. ✓
 The official survey on industrial sickness in Bangladesh was conducted by a local consulting firm known as House of Consultants. The HCL was appointed by GOB through Ministry of Industry to look into the problem. The firm also took 10 percent of 300 BSB and BSRS financed industrial units and finally a sample size of 30 industrial unit was selected for analysis and investigation. Thus the sample size selected by the researcher was within the prescribed norms of sampling practice. ✓

A survey of previous research work carried out in the field showed that the researchers have traditionally used matched paired sampling, purposive sampling or stratified sampling techniques depending upon the nature of the problem under study. It was also found that the researchers have not specified any upper or lower

limit of sample size. For example, Gupta⁸ selected a sample of 41 failed and 41 non-failed textile mills while Dave⁹ selected 9 textile mills out of 114 textile mills operating in Gujrat, India. Srivastava et al.¹⁰ also suggested matching sample of sick and non-sick companies and used the same methodology in their research work. Accordingly, the researcher has tried his best to ensure matching between the sick and non-sick units to reduce the sampling biases. For this purpose, the uniformity of industry group and fiscal year was maintained among the sample units. Some of the other criteria used in ensuring such matching are size of Capital Employed (Paid up Capital + Reserves and Surplus + Long-term Loan), total assets, total sales and total inventory. Such careful matching of sick and non-sick companies to be included in the final sample size is expected to lend reasonable cohesion and credibility to the findings of the study. ✓

3.5 Selection of Sick and Non-sick Companies :

Besides terming the financed enterprises as defaulter, the Long Form Audit Report of BSB did not attempt to classify them as sick and non-sick companies. However, this problem was overcome by accepting the criteria of loan default as a prima facie evidence of sickness and the Group A and Group B companies were

⁸ L.C. Gupta. Financial Ratios for Monitoring Corporate Sickness: A More Systematic Approach, New Delhi Oxford University Press, (1983). pp. 15-20.

⁹ Nalini V. Dave. Industrial Sickness and the Key areas of Management. New Delhi: Deep and Deep Pub., (1987). pp. 10-20.

¹⁰ S.S. Srivastava and R.A. Yadav. Management and Monitoring of Industrial Sickness. New Delhi : Concept Publishing Company, (1986). pp. 49-79.

classified as sick and non-sick companies respectively. It may be added here that the final decision was made after careful consideration of financial statement data and operating results of the selected sample companies.

Then came the problem of locating the sample enterprises precisely. For this purpose, the End Use Department of BSB was requested to provide the full name and postal address of the sample enterprises. But the information could not be obtained from BSB despite frequent visits and requests by the researcher.

Next an attempt was made to collect the aforesaid information from the Office of the Registrar of Joint Stock Company which is supposed to have this kind of information. This attempt also failed to produce the desired result in the face of flat refusal on the part of concerned officials to do the needful. The poor performance and non-cooperative attitude of this office has already been highlighted by an U.N. Team headed by Parry and others¹¹.

One high-ranking official of Dhaka Stock Exchange termed the office as a Post Office because of its disappointing performance. The researcher also found the office in a poor shape which was utterly ill-staffed and ill-equipped and hence could not provide necessary service. As an alternative, necessary information was sought from some Chartered Accounting firms but they also declined to help on the ground of confidentiality of data and professional propriety.

¹¹ Michael Parry and Ferdous Khan. A Survey of Published Accounts in Bangladesh, Dhaka. The Institute of Chartered Accountants of Bangladesh and U.N. Department of Technical Cooperation for Development (June, 1984).

As a last resort, some published material¹² were consulted. They are as follows :

- a. Directory of Selected Industries. ✓
- b. Directory of Mechanised Unit in Textile Sector. ✓
- c. Bangladesh Cold Storage Association Membership List. ✓
- d. Membership List of Bangladesh Drug Manufactures Association. ✓
- e. Tender, Quotation, Advertisement etc. ✓
- f. Auction Sale Notice of BSB. ✓

On the basis of information provided by the above source, a revised list of 200 industrial units was prepared whose name and address could be gathered. The whereabouts of remaining 190 industrial units could not be gathered or ascertained precisely. It is apprehended that between the period 20.12.88 to 10.2.90, within which data collection was done, either the unit was put on auction sale by BSB or was not registered with Ministry of Industry. It may be noted here that failure to locate an industrial unit was not an unique experience on the part of the researcher. On an earlier, occasion, the Board of Investment (BOI)¹³ could not locate 4322 industrial units out of a total of 7322 units sanctioned by it. ✓

¹² Directory of Selected Industries. Dhaka : Directorate of Industries, Government of Bangladesh, (1988).

List of Mechanised Textile Units. Dhaka: Directorate of Textiles, Government of Bangladesh, (1989).

Membership Directory. Dhaka : Bangladesh Cold Storage Owner's Association, (1987).

List of Members. Dhaka: Bangladesh Drug Manufacturer's Association, (1989).

¹³ The Bangladesh Observer. Dhaka: February 7, (1991) p.1, column 3-4.

The formal data collection process began with sending written requests to all the 200 industrial units via registered mail on 20.12.88. The respond was very poor since only 10 sample units gave a positive reply and provided the necessary information. Then another set of letters were dispatched to the sample units requesting them to furnish the necessary information. This time only three came up with a positive reply and fully complied with the request. Under such circumstances, the financial data and information regarding 11 industrial units had to be collected from the office file of Dhaka Stock Exchange Limited.

In order to improve the number of sample industrial units, the researcher personally visited the office of the concerned unit and consulted the Special Quarterly Report of BSB on Problem/Sick Projects. These efforts provided some explanation about the non-availability of the required sample units. It was found that as many as 50 units could not be obtained by the closing date of data collection due to litigation (30 units) and stuck-up (20 units). Then another set of letter was mailed out on 15.2.90 to the remaining 150 sample industrial units (70 non-sick and 80 sick).

Finally on 15.3.90, the necessary data and accounting information was obtained from 85 industrial units out of 150 units where 35 units refused to cooperate and 30 letters were returned due to wrong/fictitious address. Then after careful scrutiny of the information provided, another 61 units had to be excluded from the sample for the following reasons :

Total reply from respondents	85
a. Poor quality of accounting information	15 ✓
b. Abridged Statement	10 ✓
c. Not Properly Audited	11 ✓
d. Lack of continuity of Financial year	16 ✓
e. Non-matching fiscal year	09
	---- 61
Finally selected sample enterprises	<u>24</u> ✓

The poor quality of accounting information generated by the companies of Bangladesh origin has already been demonstrated by Ahmed¹⁴ in his study. Hobbs and Moore¹⁵ in their study opines that abridged financial statement data are not useful for research purpose. Those financial statements which were not properly audited as per provisions of Companies Act has also been kept out of the perview of the study. Lastly to enhance the homogenety of financial information relating to the sample industrial units, those financial statements were rejected which had non-matching fiscal year and lacked continuity. 23

Then, finally only those industrial units were selected as the sample companies for the present study which satisfied the following conditions viz:

- a. It must be a limited company.
- b. It is engaged in manufacturing or service type of industry.
- c. It is located in and around Dhaka District preferably.

¹⁴ Mahbub Ahmed. *Opcit.* pp. 120-28.

¹⁵ Jmes B. Hobbs and Carl L. Moore. Financial Accountintg: Concept, Valuation and Analysis. 2nd ed. Cincinati, Ohio : South-Western Publishing Company, (1984). pp. 479-92.

- d. It must be a going concern.
- e. It is defaulting on loan repayment to the banks and DFI's.
- f. It has completed a minimum of seven years of operating life.
- g. It has provided the required financial statement data for a minimum of three years and maximum of five years.

The status-wise distribution of selected sample units in the following table :

Table 3.3 : Profile of Sample industrial units

Industry Group	Group A Companies (Profitable)	Group B Companies (Losing)	Total
1. Textile	03	03	06
2. Chemicals	02	01	03
3. Electrical	00	01	01
4. Paper products	03	02	05
5. Food	01	03	04
6. Cold Storage	01	04	05
	10	14	24
	-----	-----	-----

It appears from the table that out of the selected 24 sample companies, the Long Form Audit Report of BSB has classified 10 companies as profitable and 14 companies as losing one. It may be further noted here that 15 companies are regularly quoted in the Dhaka Stock Exchange Limited. As far as the financial position of the companies are concerned, almost all of them are losing one, except few. As per the request of the sample companies, it has been decided to keep their name and address of the company

secret. Thus a code number of both the group of companies would be used in this research work. Accordingly group A companies would be marked as A₁ A₂ --- A₁₀ and Group B companies as B₁ B₂ --- B₁₄.

The geographical distribution of the companies are shown in the following table :

Table 3.4 : Location of the sample industrial units.

Sl. No.	Location	No. of Companies	% of the Total
01.	Dhaka	14	58.33
02.	Chittagong	06	25.00
03.	Khulna	03	12.50
04.	Rajshahi	01	4.17
		----- 24 -----	----- 100.00 -----

The profile of the sample industrial units selected for the study are given at the end of this chapter.

3.6 Mode of Data Analysis : For the purpose of research, the collected accounting information was analysed as follows :

a. The collected financial statement data were presented in the form of Proforma Statement and 26 important accounting variables were extracted which had a direct bearing on sickness (Appendix

9);

b. These accounting variables were used in calculating 24 accounting ratios whose relevance to the problem under study has

been fully elaborated in the Literature Survey Chapter. The ratio analysis was carried out in two phases namely Univariate Approach (where emphasis was placed on the individual ratio signals) and Multivariate (where accounting models were used based on Multiple Discriminant Analysis (MDA technique) : (Appendix 9);

In spite of extensive use of financial ratios (see page no. 9) for prediction of corporate sickness, it appears to suffer from some conceptual and methodological limitations. Ezzamal et al.¹⁶ argue that most of the researchers have selected the financial ratios on an adhoc bases without any appreciation of the relationship pertaining among them.

Karels and Prakash¹⁷ stipulates that there is a growing tendency of using large number of ratios which may be accredited to limited theoretical basis for choosing the same. He further adds that in all the previous studies with the exception of Beaver's Study, the MDA technique was used as the statistical method for predicting sickness. But he is critical about its adequacy in view of limited theoretical basis and erroneous result¹⁸.

Kuh and Meyer¹⁹ has demonstrated that the use of MDA technique causes multicollinearity problem since they tend to be highly

¹⁶ Mahmoud Ezzamal, Judith Brodie and Cecilio Mar-Molinero. "Financial Patterns of UK Manufacturing Companies", Journal of Business Finance and Accounting, 14 (4) Winter (1987). p. 519.

¹⁷ Gordon, V. Karels and Arun J. Prakash. "Multivariate Normality and Forecasting of Business Bankruptcy", Journal of Business Finance and Accounting, 14(4), Winter (1987). p. 577.

¹⁸ Ibid. p. 577.

¹⁹ E. Kuh and J.B. Meyer. "Correlation and Regression Estimates when the Data are Ratios", Econometrics (October 1955). pp. 411-16.

corelated. In addition to this Beaver²⁰, Fadel²¹, Deakin²² and Bougen and Drury²³ has shown that the financial ratios are not normally distributed. This refutes the earlier assumption that the financial ratios are distributed jointly multivariate normal²⁴.

There is also very little evidence about the intertemporal²⁵ and cross-sectional²⁶ stability of financial ratios over a period of time.

To avoid the pitfalls associated with using large number of ratios, some researchers have employed Factor Analysis and other data reduction techniques to select a smaller number of financial ratios²⁷. These ratios were found to exhibit financial pattern and retain most of the information content of original data.

To overcome these two problems, Hutchinson et al²⁸.

²⁰ W.H. Beaver. "Alternative Financial Ratios as Predictors of Failure", Accounting Review (January 1968). pp. 113-122.

²¹ H. Fadel. "The Predictive Power of Financial Ratios in the British Construction Industry", Journal of Business Finance and Accounting (Autumn 1977). pp. 339-352.

²² E.B. Deakin "A Discriminant Analysis of Predictors of Business Failure", Journal of Accounting Research (Spring 1972). pp. 167-179.

²³ P.D. Bougen and J.C. Drury. "UK Statistical Distributions of Financial Ratios", Journal of Business Finance and Accounting (Spring 1980). pp. 39-47.

²⁴ Karels and Prakash. Opcit. p. 577.

²⁵ G.E. Pinches, et al. "The Stability of Financial Patterns in Industrial Organisation", The Journal of Finance (May 1973). pp. 389-96.

²⁶ W.B. Johnson. "The Cross-Sectional Stability of Financial Patterns", Journal of Business Finance and Accounting, Vol. 5, No. 2 (Summer 1978). pp. 207-214.

²⁷ Ezzamel. Opcit. p. 519.

²⁸ P. Hutchinson, I. Meric and G. Meric. "The Financial Characteristics of Small Firms Which Achieve Quotation on the UK Unlisted Securities Market", Journal of Business Finance and Accounting, 15(1) (Spring 1988). pp. 9-19.

suggested the use of principal component analysis which takes on correlated financial ratios and reduce them to a smaller set of uncorelated principal component. Principal component have asymptotic normal distribution with the approximation to normality improving with the number of observations²⁹.

c. In order to make the ratio analysis more pragmatic, an attempt has been made to supplement it with additional non-financial information as suggested by Argenti³⁰ and empirically proved through the research work of Keasey and Watson³¹. This approach was deemed necessary to overcome the limitations of the accounting data generated by Bangladesh Companies. These limitations were identified by Ahmed³² and Parry et al.³³ in their studies;

d. As a last part of analysis, we have also evaluated the management efficiency of the owners of industrial units to determine the extent to which the deficiency in this field was responsible for industrial sickness (Appendix 9).

²⁹ L.A. Marascuilo and J.R. Levin. Multivariate Statistics in Social Sciences: A Researchers' Guide, Brook/Cole Publishing Co. (1983).

³⁰ John Argente. Corporate Collapce: Causes and Symptoms. London : McGraw-Hill Book Company (U.K.) Ltd., (1976). pp. 130-35.

³¹ K. Kessey and R. Watson. "Non-Financial Information and the Prediction of Small Company Failure L A Text of Argenti's Hypothesis", Journal of Business Finance and Accounting Volume 14, No. 3 (Autumn, (1987)). pp. 255-65.

³² Mahbub Ahmed. Evaluation of Financial Statement as a Communication Device in Bangladesh, Dhaka : The Institute of Chartered Accountance of Bangladesh, (1982). pp. 120-30.

³³ Michael Parry and Ferdous Khan. A Survey of Published Accounts of Bangladesh and United Nations Department of Technical Cooperation for Development (June, 1984).

3.7 Final Comment about Methodology :

In this study, the researcher made a sincere and determined attempt to replicate earlier research work on the subject of industrial sickness with suitable improvement where ever possible. The earlier research methodologies consisted of a specified number of sample unit, equal number of matched, - paired sample of sick and non-sick industrial unit and a heldout sample or control group. As per as the number of the sample unit is concern, it fully confirmed with the earlier resarch studies on the subject namely 33 in the study by Altman (1968), 34 in that by Dambolena and Khoury (1980), 27 in Moyer (1977) study and 25 in Belkaoui's (1978) study.

The requirement of matched paired sample was attempted but numerical equality could not be achieved due to certain extreneous problems. A held out sample of 21 industrial unit was also used in this study but perfection could not be achieved due to nonavailability of annual account report. Lastly, some effort was made to improve the methodological aspects of research. But besides mentioning certain methodological limitation of earlier studies, the researcher could achived very limited success in this respct in view of shortage of qualified personnel with adequate exposule on the subject matter having good knowledge of advanced statistics and computer applications.

Thus the researcher had to be satisfied with use of ratio analysis coupled with nonfinancial information and expert opinion survey. It is hoped that future researchers would come forward to overcome the methodological limitation mentioned above.

APPENDIX G
TABLE-3.5
SUMMARY OF RESULTS DERIVED FROM THE SURVEY

The Various Problems	No. of respondents		Major problem		Moderate problem		Minor problem		Insignificant problem	
	No.	%	No.	%	No.	%	No.	%	No.	%
1. Power Supply problem	20	-	13	65	3	15	-	-	4	20
2. Problem regarding Acquisition of input	20	-	7	35	9	45	-	-	4	20
3. Problem regarding marketing Export of product	20	-	13	65	5	25	-	-	2	10
4. Problem regarding Acquisition of loan	20	-	15	75	3	15	-	-	2	10
5. Problem regarding storage product	20	-	7	35	5	25	-	-	8	40
6. Problem regarding working capital	20	-	9	45	11	55	-	-	-	-
7. Problem regarding Technical Know-how	20	-	10	50	7	35	-	-	3	15
8. Problem created by trade union	20	-	5	25	8	40	-	-	7	35
9. Problem faced in obtaining trained labour force	20	-	2	10	1	05	-	-	17	85
10. Competition problem in domestic market	20	-	12	60	2	10	1	05	5	25

TABLE-3.6

LIST OF SELECTED INDUSTRIAL UNITS COVERED BY THE STUDY

Code No. of the Company	Product manufactured	No. of Employed	Sanctioned capacity	Average production in the last 3 years	Actual Production 19	Date of Incorporation	Date of commencement of business	Date of commercial operation	No. of Directors	Remarks
B1	Textile (Specialised product)	150	1.310 lac meters	0.917 lac meters	2.04 lac meters	1.9.79	1.9.79	10.30.80	4	This is a small Textile manufacturing industry.
A1	Textile Dyeing and Printing (Mechanised)	450	90.575 lac meters	50.666 lac meters	50.782 lac meters	25.11.68	25.11.68	30.5.69	3	This is one of the country's leading manufacturing unit.
B3	Textile Dyeing and printing (Mechanised) Terry towel, bed cover, bed sheet, pillow cover	600	89.407 lac metric ton	49.17 lac tric ton	48.16 lac metric ton	15.4.77	15.4.77	5.4.77	8	This unit is a textile manufacturing unit located in Chittagong
B7	Yarn, cloth	961	Yarn 1455 metric ton	Yarn 873 tric ton	9 Yarn 946 metric ton	13.6.66	3.8.66	25.4.67	7	This unit is a textile manufacturing unit located in Chittagong.
B2	Cotton and Synthetic yarn Canvas, School bag, Tarpaider Rain Coat etc.	200	Yarn and synthetic cloth 0.282 million mt.	N.A.	N.A.	20.9.80	20.9.80	20.9.80	4	This is a textile manufacturing unit.
A2	Synthetic and cotton socks	-	N.A.	N.A.	N.A.	19.12.81	19.12.81	1.9.85	5	This is 100% export oriented sock manufacturing unit.
A4	Ball point pen Refill	-	52000 gross	22000 gross	239722 gross	18.7.84	1.11.84	1.11.84	7	This unit is a modern ball pen manufacturing unit.

Code No. of the Company	Product manufactured	No. of Employed	Sanctioned capacity	Average production in the last 3 years	Actual Production 19	Date of Incorporation	Date of Co-management of business	Date of commencement of commercial operation	No. of Directors	Remarks		
85	Sunlite brand dry cell batteries	35	20000 million pieces	8.240 million pieces	10727 million pieces	16.3.82	16.6.82	16.8.83	3	This unit was also purchased as a disinvested industry from the Govt.		
84	Printing Ink (black, red and yellow)	36	300 metric ton	92.76 metric ton	85 metric ton	23.9.75	23.9.75	1.7.80	4	This unit was also purchased as a disinvested industry from the Government		
85	Tablet, Capsule, oral liquid	273	20.00 million pcs.	19.140 mill. pcs.	1-32 mill. bottle	4.40 mill. tubes	0.20 mill. packet	6.6.78	6.6.78	10.5.79	7	This unit was started as a small private Ltd. Co. in 1967 for carrying on Drug Manufacturing. It was then converted into public Ltd. Co. since 1977.
87	Stencil paper, Ceiling cill paper 'Diplomat' brand paper back gummed paper carbon paper Emary paper sheet paper. Typewriter Ribbon	330	60.48 m. sheet	7.00 m. sheet	0.220 m. sheet	8.9.76	8.9.76	16.9.76	5	This unit was purchased by the present owner from Govt. This company was later on converted into public Ltd. company on 20.4.79.		
87	All types of packaging and printing work	33	Post-facto unit	58.56 m.	10.4.77	10.6.77	3.12.79	8	This project was sanctioned in 1977 by 858. But it remained dormant upto 1977 when it was revived as a public Ltd. Co.			

Code No. of the Company	Product manufactured	No. of Employed	Sanctioned capacity	Average production in the last 3 years	Actual Production 19	Date of Incorporation	Date of commencement of business	Date of commencement of commercial operation	No. of Directors	Remarks
88	Shramos adn Froglegs (2 Kg. packet)	85	840 metric ton Shramp 227 mt.	511 metric tons	504.42 metric ton	20.4.80	20.4.80	20.6.80	8	This is a fish processing and exporting unit located in Khulna.
										F.L. 403 " F.P. 210 " Tot. 440 mt.
B10	shramos and Froglegs	150	205 metric ton	572 metric ton	N.A.	13.12.77	13.12.77	13.12.78	5	This is one of the unit of Bexia co group of Industries.
B9	Bread and Biscuit	134	1500 metric ton 1500 metric 843 mt.	676 metric ton	- N.A.	5.8.79	10.9.79	6.7.81	6	This is a bread and biscuit manufacturing unit located in Chuadanga.
B6	Samplex Board: (17.13 x 64.46 C.M.) 5 to 10 gramma thickness	84	1200 metric ton	792.50 metric ton	582.90 metric ton	2.4.77	12.6.77	13.12.79	7	This project was sanctioned in 1967 but it remain dormant upto 1977 and then it was put into commercial operation.
A6	Paper and Board 79.63 x 204.90 C.M. 228 to 400 gramma weight	402	2000 metric ton	900 metric ton	1000 metric ton	6.9.77	6.9.77	7.1.82	5	This is a very large paper and board manufacturing unit of the country.
B12	Potatoes Preservation and storage	24	3000 metric ton	1982 metric ton	2110 metric ton	4.2.62	4.2.62	15.4.63	4	This unit is owned by M.T.H. Chowdhury.

Code No. of the Company	Product manufactured	No. of Employed	Sanctioned capacity	Average production in the last 3 years	Actual Production 19	Date of Incorporation	Date of commencement of business	Date of commercial operation	No. of Director	Remarks
B11	Potatoes Preservation and storage	26	2500 ton	2723 mt. ton	2906 mt. ton	1967 by some Ssheli business		10.4.68	5	This was taken over by present management in 1975. The capacity was increased from 1000 ton to 5000 tons.
A10	Potatoe Storage and Preservation	40	4200 metric ton	4246 metric ton	4200 metric ton	10.6.67	N.A.	15.3.68	8	This is a cold storage unit located in Betka, Munshiganj.
A9	Shrimp fish processing and export	150	8400 metric N.A.		N.A.	20.3.79	20.3.79	7.7.79	4	This is a leading fish processing and exporting unit of the country.
A8	A Modern Printing and Packaging unit	180	Carton, Box etc.	20 million 10 million 11 million 24 million	24 million 13 million 11 million 24 million	4.5.77	N.A.	12.4.79	5	This is a printing and packaging unit of the country.
B13	Cold Storage	35	2500 tons of potato per year	1800 tons of potato per year	2000 tons of potato per year	16.7.75	N.A.	12.10.77	5	This cold storage was purchased by T.H. Chowdhury, from Mr. Ahsan Ali of Kalabagan, Dhaka.
B14	Cold Storage	25	3500 mt. ton of potato per year	2600 ml. ton of potato per year	2800 ton of potato per year	10.6.74	N.A.	15.5.76	4	This cold storage unit was purchased by T.H. Chowdhury from Mr. A. Hossain of 6, D.C. Roy Road, Armanitola, Dhaka.

Chapter - IV

Industrial Environment in Bangladesh and its Impact on the Industrial Enterprises

4.1 Introduction

A review of the literature survey chapter makes it quite clear that environment which is basically external to an industrial organisation exerts tremendous influence on its overall health and well-being. The environment itself is very dynamic and complex in nature. Thus for the sake of survival, the an industrial unit has no other alternative but to match its performance with the ever-changing environment, which is a conglomerate of numerous socio-political and economic factors. Further, the environment is full of risk, uncertainty and other normal economic hazards which might totally upset the operating result of an industrial organisation. This makes quite obvious on the part of such organisation to be fully familiar with the aforesaid environmental factors and evolve suitable remedial measures to protect itself from its onslaught. A proper comprehension of the environment surrounding an organisation is also vital for its well-being since it is not endowed with a natural immunity system. Therefore, the management of such organisation must keep a close watch on the external environmental factors and install an immunity/protective system based on expert knowledge, experience and business acumen.

Thus in view of the overwhelming importance of the external environmental factors in the context of an industrial organisation, this chapter would be devoted to the discussion on the pertinent factors namely risk, system characteristics and

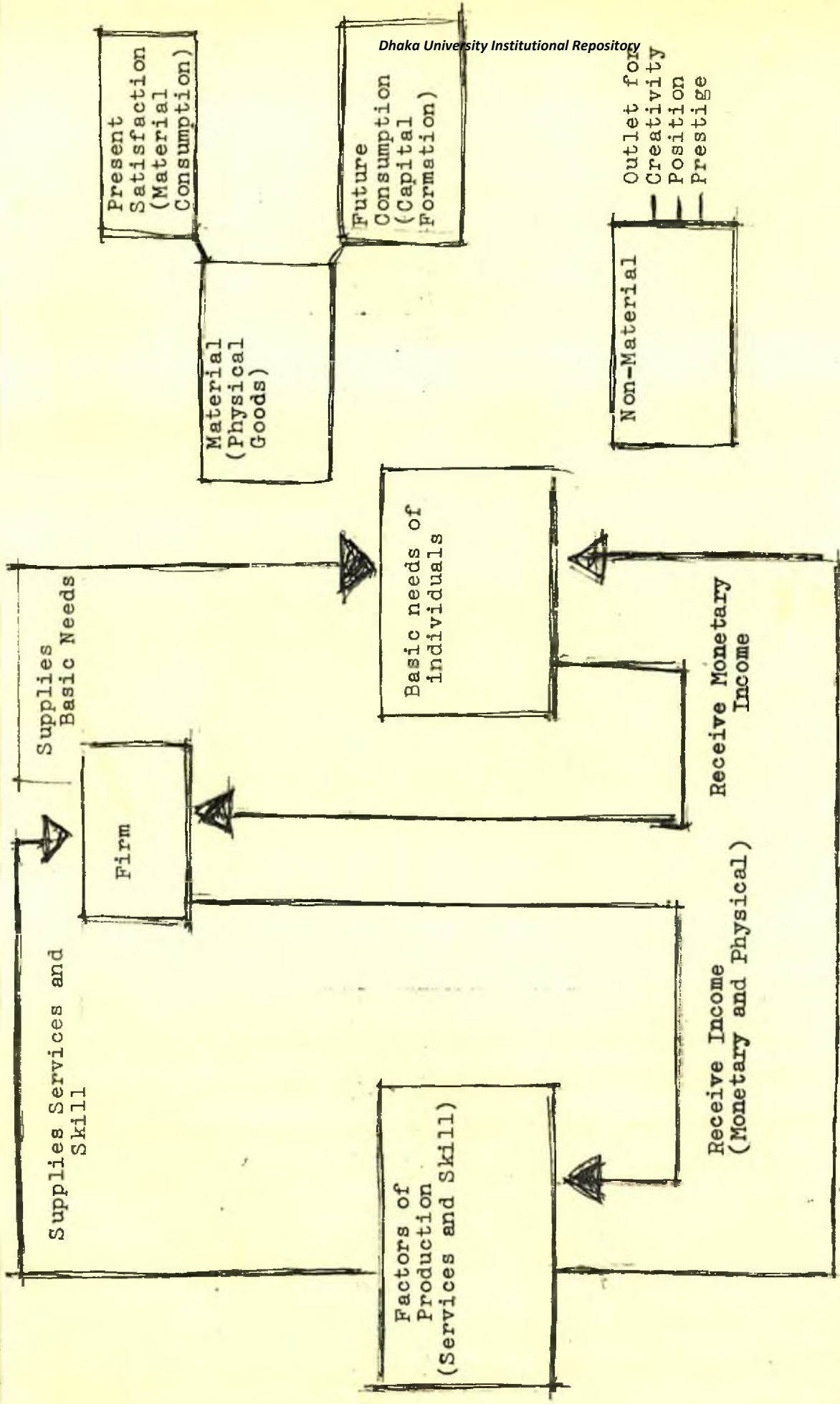
life cycle with special reference to their influence on the sickness of an industrial organisation. This would be followed by detailed discussion of the environmental factors prevailing in Bangladesh and assessment of their impact on the sample industrial units in particular and the industrial sector in general.

4.2 Environment of an Industrial Organisation

It may be recalled here that environmental aspect of an industrial organisation has all ready been strated in breif in the second chapter. Nevertheless, the special aspects of the environment namely risk, life cycle, operating characteristics and system aspects desirved special attention. Accordingly this section would be devoted to examine the aforesaid aspects in some details since this may provide valuable clues regarding industrial sickness.

For profer comprehension, the environmental aspects (external) has been displayed in the diagram number 4.1 to 4.4. The first diagram depicts the socio political environment of an industrial unit. The second one shows the internal operating feature of an industrial unit. The third one shows the cash recovery process which is self explamatory and 4th one shows the anatomical model of an industrial organisation.

The first diagram shows that if the tasks of providing the needs of the society are carried out, then all its needs wuld be met. This would help in capital formation. This capital could again be invested in industry for further augmentation of wealth of a society. If due to some reason on other this positive trend

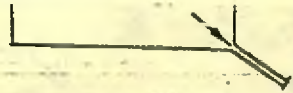


Monetary and Physical Income to meet the Society's basic needs.

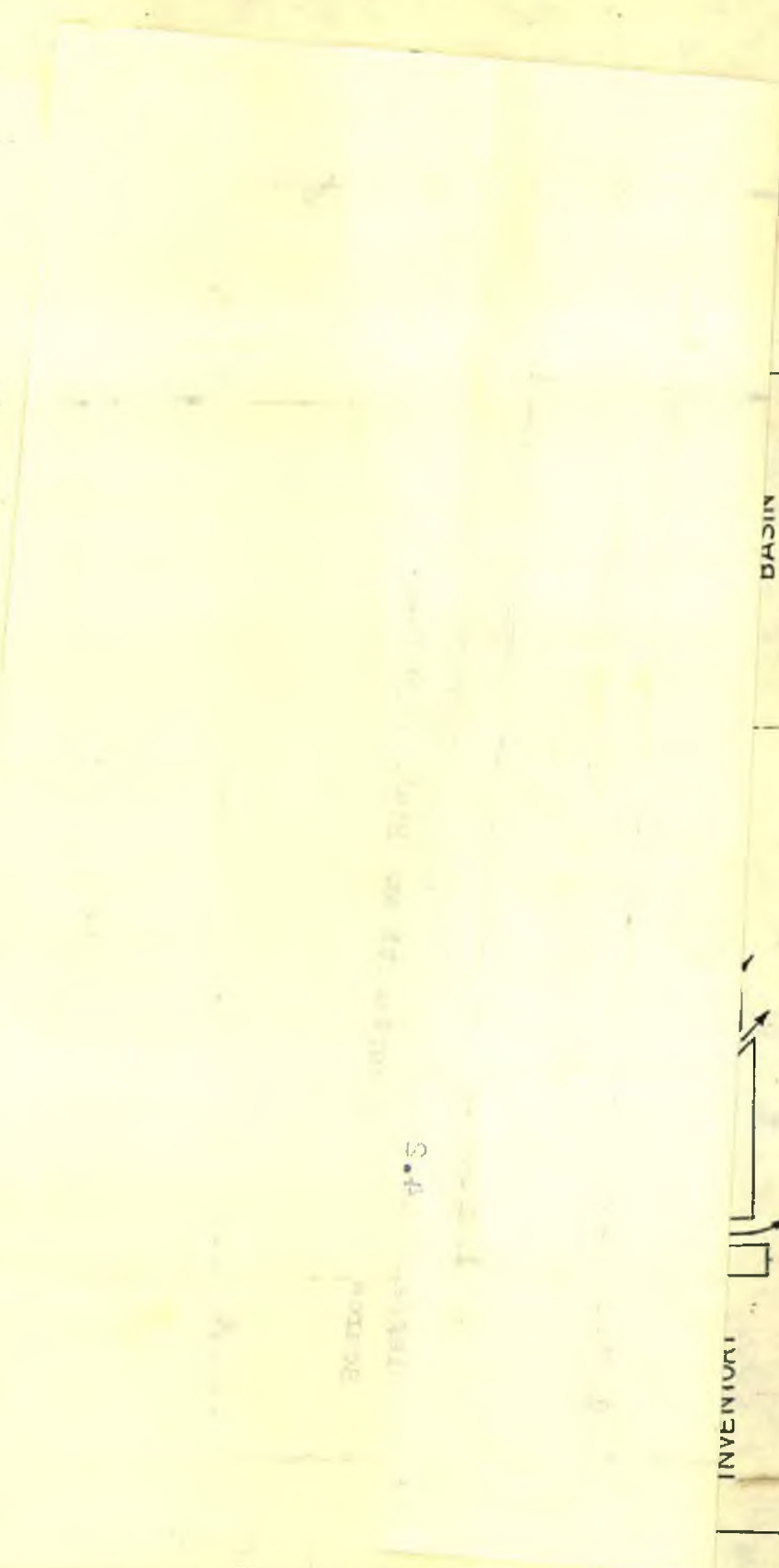
Diagram No.4.1 : The Firm as an intermediary

Source : Archer and D'Ambrosio Page no.32.

RETURN
TO OWNERS
INCOME TAX
INTEREST



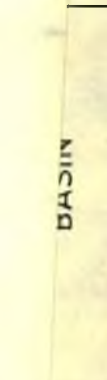
(LEAKAGES)



INVENTORY



BASIN



(LEAKAGES)

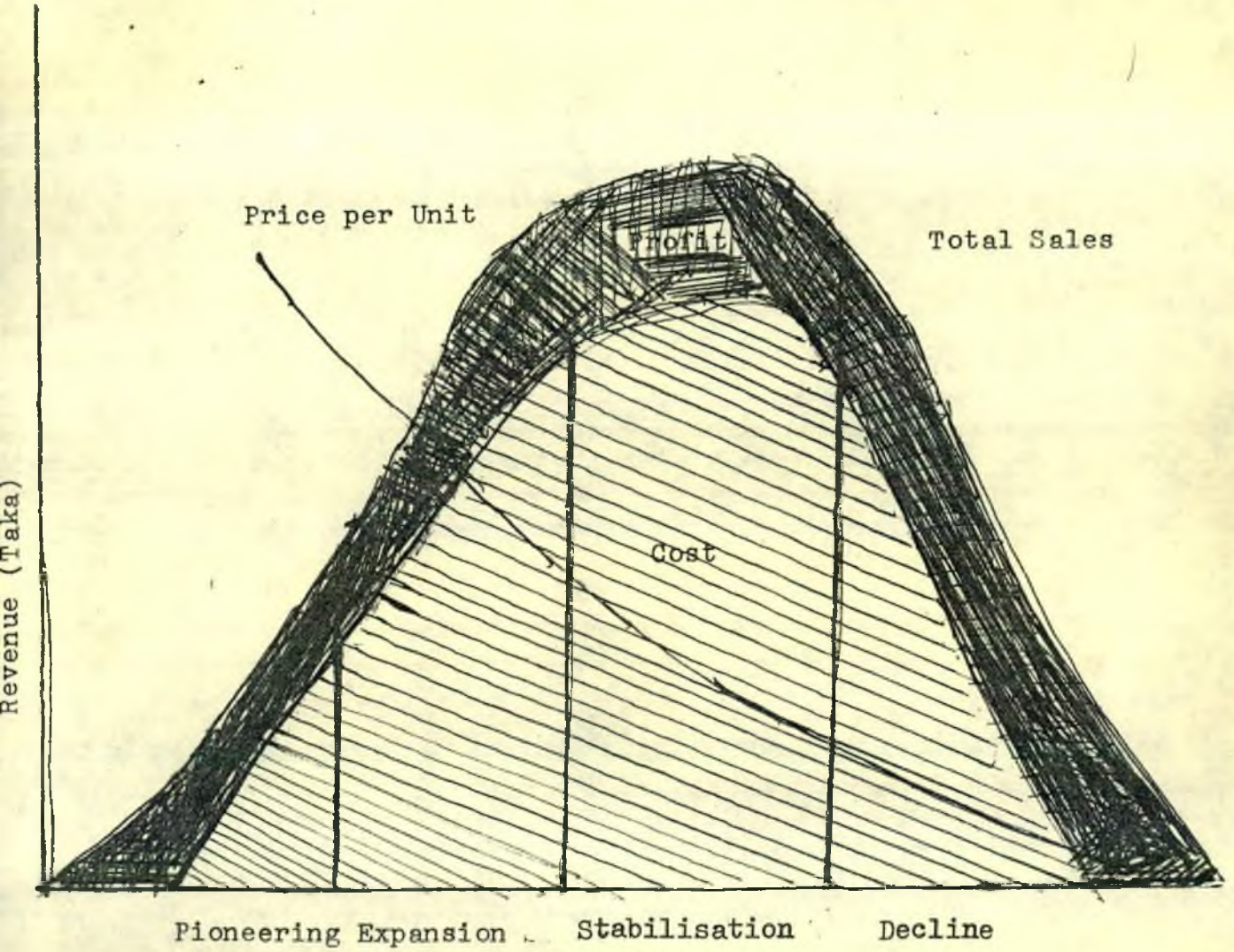


Diagram No.4.4 : Life Cycle of an Industrial Organisation.

Source 9

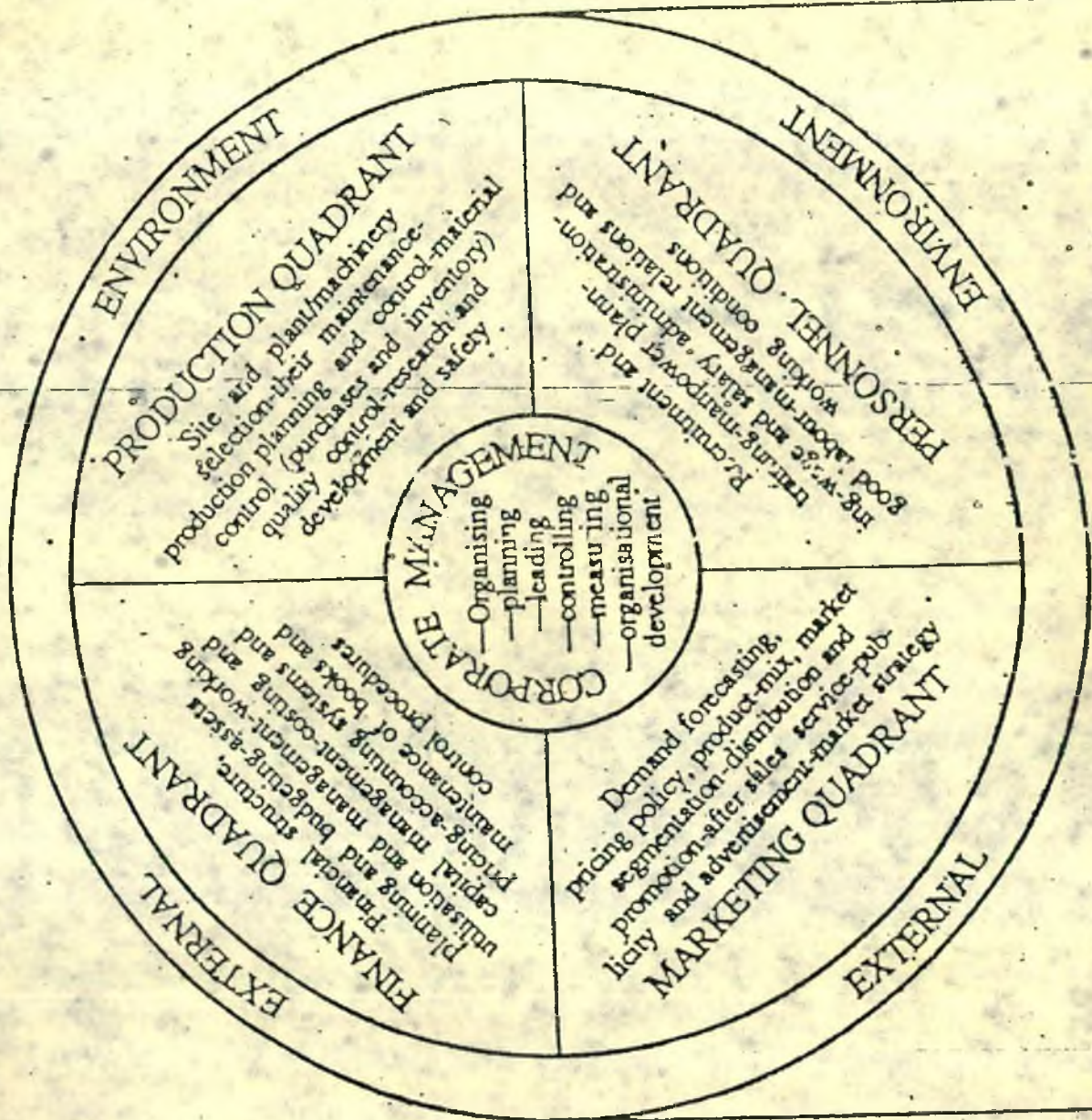


Diagram No.4.5 : Anatomy of an Industrial Unit.

Source : (Bidani and Metra Page. No.12)

is broken, then it will bring about the failure of an industrial unit¹.

The second diagram gives a vivid idea regarding the operating characteristics of an industrial organisation. The savings of the society are channelised into the industrial organisation through the banks and the organisation attempt to earn a Net Income through production and sale of goods. At the same time, the organisation retains a part of the income known as Retained Earnings² and it is again invested into the business. The sources of acquiring necessary resources are own capital and debt capital². A healthy organisation derives bulk of its capital from normal business operation and supplements it occasionally with borrowed money. It has been observed that a sick business organisation relies heavily on borrowed money and their own investment is very meagre. This attitude clearly indicates that these entrepreneurs are not aware of the financial and economic risks involved in such mode of financing business operation. They also use the short-term loan for long-term purpose and vice versa³. The third one shows the cash recovery process which is very complicated. The fourth one shows the anatomy of an industrial organisation suggested by Bidani and Mitra⁴ which

¹ 54 Stephen H. Archer and Charles, A.D. Ambrosio. Business Finance: Theory and Management, New York: McGraw-Hill Book Company (1966). pp. 314-17.

² Flayd E. Bertchelt and Clifford M. Hicks. Corporate Finance, Policy and Management, 4th ed. Lincoln S, Nevraska: Goodyear Publishers (1982). pp. 125-35.

³ John Old and Tony Shafto. An Introduction to Business and Industry, London: Pitman and Sons Ltd. (1987). pp. 53-72.

⁴ S.N. Bidani and P.K. Mitra. Industrial Sickness: Identification and Rehabilitation, 3rd ed. New Delhi: Vision Books (1982).

will be used as a basis of analysis in this study.

The component of the environment

The external environment of an industrial organisation is full of risk/uncertainty and an industrial organisation is destined to fail if it overlooks these vital points⁵. Risk implies that an unpleasant consequence is associated with a given course of action. It comprises of two types of risks namely Business Risk and Financial Risk⁶.

Business risks refers to those risk arising from the uncertainty of future revenue and expenses (not including the debt interest of the firm), i.e. riskiness of the firm's EBIT. It is influenced by management policy, economic condition, consumer demand etc. For example, inflation is a business risk which lies beyond the control of the management. Other instances of business risks are adverse business condition, international conflict, technological change and change in government policy. It may be further added here that the Degree of Leverage is related to the degree of risk faced by an industrial concern. Operating Leverage

⁵ Lawrence D. Schall and Charles W. Halley. Introduction to Financial Management, 2nd ed. New York: McGraw-Hill Book Company 1980). p. 796.

Ezra Solomon and John J. Pringle. An Introduction to Financial Management, New Delhi: Prentice-Hall of India Private Ltd. (1978). p. 600.

Benton E. Gup. Principles of Financial Management, New York: John Wiley & Sons, Inc. (1983). p. 358.

⁶ O'Connar, Dennis J. Op Cit. pp. 22-23.

in related to the business risk which is inherent in the firm's own operation⁷. Financial Risk is the risk which arises from the debt financing over and above business risk. For example when a business concern uses more debt fund than equity, the riskiness of the cash flow is increased. The maturity of debt obligation adds another dimension to the financial risk⁸.

The method of financing can have a very far-reaching effect on the firm's financial risk. It has been found that firms which borrow heavily and has a high loan obligation is exposed to higher degree of financial leverage. It must be remembered here that if the sales volume falls below the break-even point, there lies a financial risk that the firm may not be able to meet the financial obligation because of a short-fall of revenue earning⁹.

As a general rule, high degree of Combined Leverage, Financial Leverage and Operating Leverage are associated with high degree of risk. If sales revenue increases through the decrease of risk, financial Leverage is compensated by high degree of return. Conversely, if the sales do not increase substantially, the firm with high degree of financial leverage faces bankruptcy or failure¹⁰. The degree of risk is dependent partly on the availability of sales and earning¹¹.

⁷ Benton E. Gup. Op Cit. pp. 360-61.

⁸ Benton E. Gup. Op Cit. p. 223.

⁹ Ibid. p. 223.

¹⁰ Ibid. p. 223.

¹¹ S.K.R. Bhandari and H.S. Kulsreshita. Essays in accounting, Agra: Sahitya Bitan 1964. p. 124.

Gup, Benton E. Op Cit. p. 170.

Firms with high degree of operating and business risk tend to have a lower debt capacity than firms with low operating leverage. The reason is that the lenders are more willing to lend to firms with low business risk than the firms with high business risks. Thus it is very evident here that business risk and operating leverage and financial risk and financial leverage are very much inter-related¹².

It may be further added here that the Capital Structure of a company comprises of two types of capital namely Equity Capital and the debt capital. The equity an contributed by the owner himself and he is not required to pay anything for its use. The debt capital, on the other hand, is obtained from bank, DFI and other sources. The user of debt capital has to pay a charge which is known as cost of capital. A company must earn enough revenue to meet Cost of Capital which is regarded as the minutes rate of return on investment. The cost of capital is determined by two portant features namely degree of risk and the type of risk. It the degree of risk changes, then the Cost of Capital will have to be recalculated.

4.3 System Concept and the Industrial Organisation

The systems concept as such is very valuable tool and it would be of immense help for an unit in maintaining a

¹² John Dearden, "MIS is a Merge". Harvard Business Review, Vol. 50, No. 1 (January-February, 1972). pp. 98-99.

F.E. Katz and J.H. Rosenywug. "General System Theory: Application for Organisation and Management, Academy of Management Journal, Vol. 15, No. 4 (Dec. 1972). pp. 447-65.

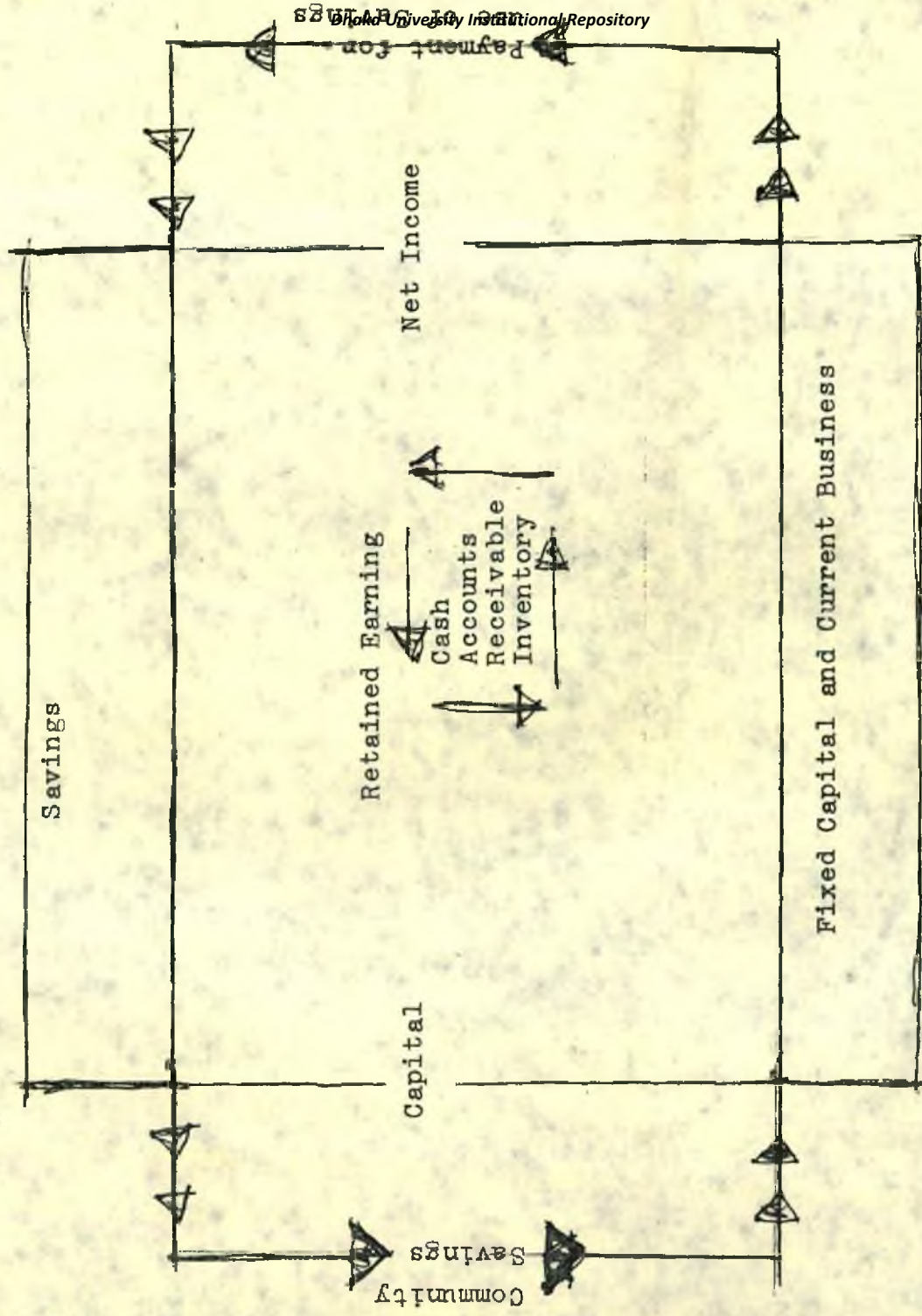


Diagram No.4.2 : Flow of Capital into the Business.

Source : Burtchett and Hicks Page no.7.

synchronation with the external environment. It must attain a steady-state or equilibrium with the external environment for a sustained growth and development¹³. An efficient manager, while attempting to attain such status should constantly scan the external environment. Even if it is true that a manager has little or no control over the changing environment, they have no other alternative but to respond to them¹⁴. The Oxford English Dictionary defines a system as, "a set or assemblage of things connected or interdependent so as to form a complete entity, a whole composite of parts in orderly arrangement according to a scheme or plan¹⁵. A business or industrial organisation as such is an open system which exchanges matter, energy and material with the outside environment. Some of the important system characteristics of an industrial organisation are :

(a) It has peripheral area which separates it from the environment and may be fixed or rigid one.

(b) It must attain "Steady-State" or dynamic homeostatis' with the environment. The ward 'dynamic' implies that the steady state is constantly in motion and the ward 'homeostates' is borrowed from the medical science denotes a mechanism in a living organisation which enables it to maintain constant body temperature in the face of changing environment. This state could only reached and maintained through efficient extraction of input

¹³ E.E. Emery (ed). System Thinking: Selected Reading. Hammandwarth, Middlesex: Penguin Books Ltd. (1972). pp. 9-11.

¹⁴ Harold Koontz, Gril O.Donnel and Henry Weihrich, Management, 6th ed. New York: McGraw-Hill International Book Company (1984). p. 14.

¹⁵ Elwood S. Buffa. Modern Production Management, 4th ed. New York: John Wiley & Sons, Inc. (1973). pp. 46-51.

from the environment and producing the necessary output.

(c) The input must be greater than the output.

(d) It must have an efficient feed back of information system¹⁶.

Buffa points out that system concept if properly applied would be very helpful in understanding complex management problem through block diagram. The diagram clearly shows the various elements of the problems and interection between them.

4.4 Life Cycle of an Industrial Organisation

At this stages, an attempt would be made to look into the life cycle or growth pattern of an industrial organisation. This is very vital in our enquiry into the causes of industrial sickness since experts have already mentioned that an industrial unit may become sick at the early or embryonic stage. The typical life cycle of a business organisation is shown in diagram: 5.

This life cycle indicates that there are four stages in the growth pattern namely poineering or inception, expansion, stability and decline. At an early stage, a handful of firm operates in the industry and per unit price of product is high resulting in low profitability. As the organisation move towards expansion stage, more firm enter the industry leading to tough competition. At this time the per unit price gradually declines and profit increases. As the firms takes a stride to

¹⁶ Benton E. Gup. Principles of Financial Management. New York: John Wiley & Sons, Inc. (1965). p. 358.

the next stage namely stability, only the efficient firm remain in the industry and less efficient or incompetant firms are totally eliminated. The surviving firms then make a determined effort to consolidate its positions in the market through introduction of improved and diversified variety of products, occupy a major market share and minimise sales volume through aggressive marketing and Research and Development activity. To survive and grow during this stage, an industrial organisation must possess three essential qualities VIZ:

1. Sufficient Capital to finance expansion and continued operation inspite of falling sales;
2. Market now product and process;
3. Sufficient scale or size so that products could be produced at a large scale at the lowest possible cost per unit¹⁷.

It may be further added here that the requirement of fund or cash resources vary over the various stages of life of an industrial organisation. At the early stage of its growth, the requirement of fund increases which has to be provided if the tempo of growth and stability is to be sustained. The fund for acquisition of productive assists can be obtained from internal and external sources or combination of both. Internal sources of fund can be provided through Retained Earning and Depreciation.

In the former case, reinvestment of retained earning also known as plowback allows the firm to achieve growth limited only

¹⁷ Weston, J. Fred and Eugene F. Brigham, Managerial Finance, 6th ed. Illinois: The Dryden Press (1978). pp. 892-93.

by the amount of plowback. In the latter case, the reinvestment of depreciation fund does not facilitate growth but rather helps replacement investment. To be more specific when firm engaged in contineous replacement through depreciation reserves at the same rate of return without any additional investment, the firm size remains stationary.

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When the assets of the firm are grawing through new investment of earning or fund from other sources but the rate of return rmain the same, then the firm is an expansion path.

Again when the asset base is grawing and the rate of return on new investment is larger than that on existing assets, then the firm is an growth path. External sources of fund can be generated by sale of financial claim to income and the anticipated cash flow from the firms assets portfolio. The various financial instruments utilized in financing the firm's expansions and growth path reflect the needs of both the entrepreneur and purchasers of such claim. Some of the most commonly used sources of long-term external fund are common stock, prefered stock and convertible securities.

The decision of the corporate management regarding the size and complexities of claim in the firms income and anticipated cash flow determine the capital structure of the firm. The tern capital structure refers to the structure of the internal fund and financial claim reflecting the firm's past financial choices.

The last phase of the life cycle is decline where the firm faces acute financial and other problems in the face of declining sales revenue and profitability. For the purpose of protecting it

from eventual sickness and collapse, an industrial organisation must try to improve its position in the market through introduction of capital, increased R & D activity, introduction of improved variety of product or merger with another healthy business organisation. In short every successful industrial organisation must strike to expand the stabilization phase and forestall the declining phase¹⁸.

4.5 Environmental Factors and its Impact on Sample Units

The foregoing discussion makes it quite clear that every thing including man and industrial organisation must adopted with the dynamic environment for survival. In case of man, it is easy as it is endowed with intelligence, vision mobility and other human qualities. On the other hand, it is very difficult to adopt manoeuvring techniques as it does not possess any of the foregoing qualities. Thus it becomes obligatory on the part of management to incorporate the necessary qualities through its farsight, intelligence, business acumen and hard work. It is also been found that business organisation acquires compititive strength, reserve strength, earning power etc. from the work of an efficient management.

Thus for the purpose of this study, the owners and entrepreneurs of the selected industrial enterprises were asked to comment on the causes which tended to push their organisation

¹⁸ Gup, Benton E. Opcit. pp. 24-25.

towards sickness [Appendix D]. On the basis of their response, a number of factors were identified. They are:

- a. Historical factor
- b. Government policy
- c. Devaluation of Bangladesh Currency
- d. Supply position of raw material, fuel and other inputs
- e. Cost and availability of electricity,
- f. Decline in demand
- g. Labour Management Relationship
- h. Law and order situation
- i. Inefficient transport and communication
- j. Support from DFI's and other infrastructural development agencies.

Most of the Managing Directors (MD) and Chief Executive (CE) of the sample enterprises expressed the view that the above noted factors were mainly responsible for their poor performance and eventual sickness. The management of the enterprises, however, could not provide any plausible explanation regarding their failure to monitor and tackle the adverse impact of the external factors. Here, an attempt has been made to examine each of the factors (both internal and external) with a view to determine the fallacy or truth behind the argument put forward by the management of sample units that caused sickness.

4.6 External Environmental Factor :

The factors belonging to this group are discussed as follows:

- a. **Historical Factor** :

History of industrialization in Bangladesh is of a recent origin. Traditionally, geographical territory now forming Bangladesh served as hinterland for more developed areas of the sub-continent like Calcutta, Bombay, Madras etc.¹⁹. Starting from early part of the nintenth century up to 1940, a number of industrial units in the field of jute, cotton, handloom etc. did grow up but Bangladesh gained very little out of this industrialization process²⁰.

Latter on when it formed part of Pakistan's eastern wing in 1947, it inherited no significant industrial base²¹. This the new born country had to march towards industrialisation from a clean slate. By the year 1960, some industrial base developed in the country and achieved a growth rate of 15 percent per annum which was acclaimed as a great success in the then contemporary world²². But the rate of growth in industrial sector of the eastern wing turned out to be quite unsatisfactory in comprision with the western wing in view of its large agricultural sector, poor resources and dearth of efficient entrepreneurs²³. However with the passage of years, a number of industrial units in the field

¹⁹ F. Karim Khan. An Introduction to Economic Geography. 4th ed. Dhaka; New Age Publication, (1962). pp. 585-91.

²⁰ A.Z.M. Iftexharul Awal. The Industrial Development of Bengal. (1900-1939). Dhaka: University Press Ltd., (1988). pp.15-25.

²¹ Akhtar H. Siddique. Economy of Pakistan 1947-62: A Select Bibliography. Karachi; Pakistan Institute of Development Economics, (1962).

²² Stephan R. Lewis. The Economic Policy and Industrial Growth in Pakistan. London. George Allen & Unwin Ltd., (1969). pp. 2-20.

²³ Ibid. pp. 3-40.

of jut, cotton, paper, sugar, fertilizer, oil refinery grew up in the country under the leadership of such leading institution like East Pakistan Industrial Development Corporation (EPIDC), Industrial Development Bank of Pakistan (IDBP) and Pakistan Industrial credit and Investment Corporation (PICIC)²⁴.

When Bangladesh emerged as a sovereign state on Dec 16, 1971, the ruling government accepted socialism as a policy for economic emancipation of mases and brought all major industrial units under public sector²⁵. Before the policy could make any headway, another Government came to power and started denationalizing all the industrial units and raised the private sector investment ceiling from Tk. 30 million to Tk. 100 million²⁶. One noted economist observed that the newly-emerged moneyed class (pressure and interest group) grabbed this golden opportunity of becoming rich overnight by buying the denationalised industrial units²⁷. They were able to accomplish this mission by using the "black money" and liberal credit facilities provided by the BSB and BSRS²⁸. Between the year 1972 -1985, BSB disbursed a project loan of Tk. 2791.2 million²⁹.

 24 Altaf Gauhar (ed). Twenty Years of Pakistan. Rawalpindi; Pakistan Publication, (August, (1967)).

25 Nurul Islam. Development Planning in Bangladesh: A Study in Political Economy. London: C. Hunt & Co. (1977). pp. 1-11.

26 Ibid. pp. 8-10.

27 Ibid. pp. 30-35.

28 Rahman Sobhan and S.A. Mahmood. "Repayment of Loan to Specialised Financial Institutions", The Bangladesh Development Studies. Vol. 9, No. 1, (October, (1981)). pp. 135-75.

29 Shahadat Ali et al. "Aspects of Development Financial Institution of Bangladesh", Paper Presented at the Seminar on Economic and Management Problems of Development Banking. Dhaka; Bangladesh Economic Association, (April 12, (1987)). pp. 8-10.

But unfortunately, things did not move in the right direction and started giving birth to such problem as rising volume of outstanding loan, increasing number of sick industrial units and loan defaulters. The problem was further aggravated when donor agencies like World Bank, International Monetary Fund (IMF) and Asian Development Bank (ADB) suspended loan programme to BSB when it failed to achieve a loan recovery target of 50 percent³⁰. Thus the lending of fund to the new and existing industrial units came to a grinding halt and threw the financial sector of the country in a serious liquidity crisis and indiscipline³¹. Thus it is clear that mere pumping of large public fund in the industrialisation process failed to attain the desired goal and gave rise to the problem of industrial sickness. Professor Huq tried to explain the background scenario of the unpleasant outcome of industrial loan program in the following words :

"Recent experience with financial support to the private sector in Bangladesh have not been satisfactory. In an unstable economic environment, many individuals in the private sector in collaboration with the bureaucrats, bankers and army officers have taken advantage of opportunities to get easy cash without any genuine desire to make repayment-political interference also played its role in default"³².

This type of negative attitude on the part of entrepreneurs

³⁰ Rahman Sobhan and Binayak Sen, "Trend in the Repayment Performance in DFI's: Implication in the Development of Entrepreneurship in Bangladesh", The Bangladesh Development Studies. Volume 17, No. 3, (September, (1990)). pp. 21-26.

³¹ "Dash Hajar Koti Taka: Ki Bhabo Aday Hobe", Bichitra Cover Story. Volume 10, No. 5, (June 10, (1991)).

³² M. Shamsul Haque. "Bangladesh: Background Facts with Special Reference to Private Sector." Journal of Business Administration. Volume 16, No. 1-2, (Jan.-Apr., (1990)). pp.45-60.

have severely affected the industrial development programme and the number of sick industries are rising steadily. Faced with such problem, government tried its utmost to persuade the defaulting borrowers to pay back their loan through provision of some incentives³³. Some legal measures were also contemplated to solve the problem³⁴. But the 'carrot and stick' policy of GOB did not produce the desired result in view of poor respond from the defaulting borrowers³⁵. Thus it is apparant that the "pressure and interest groups" have once again demonstrated their superior power to twist the policies and directions of Government to meet their own interest. It may be added here that the problem of industrial sickness was experienced by IDBP in the decades of 60's in the form of mild cost and time overrun³⁶. But the problem has assumed serious proportion in the recent time.

b. Government Policy :

From the above discussion, it is apparent that the Government policy regarding industrialization osciliated between the dilemma

³³ Banking Control Department (BCD). Circular No. 19. Dhaka; Head Office, Bangladesh Bank, (August 19, (1991)).

³⁴ Banking Control Department (BCD). Circular No. 15. Dhaka; Head Office, Bangladesh Bank, (May 20, (1991)).

³⁵ "Sick Industry Sinking", Press Report. The Morning Sun. (September 23, (1991)).

"Shilpa Banker Anadayee Rin, Beshir Bhage Aat Joner Nikat". The Daily Ittafaq. (December 19, (1990)).

³⁶ M.M. Memon, "The Role of IDBP in Rehabilitation of Sick Projects", The Cost and Management Accoiuntant. Vol. XVI, No. 2 (March-April, (1988)). pp. 21-26.

of Nationalization/Privatization Policy and has failed to attain the desired goal. This was frankly admitted by the former Vice President Moudud Ahmed in Parliament and the Secretary of Ministry of Industry³⁷. Similar views were expressed by former Finance Ministers Dr. Wahidul Huq and Mr. Saifur Rahman³⁸. The Government has so far introduced New Industrial Policy (NIP), Revised Industrial Policy (RIP) and Industrial Policy of 1991 but the overall situation has not improved³⁹. It may be added here that the Government has not yet formulated any policy for solving the problem of Industrial Sickness except formation of Sick Industries Rehabilitation Cell and the Industrial Development Council⁴⁰. The Drug Policy and the Maximum Retail Price (MRP) regulations has choked the development of industry instead of helping its growth⁴¹. In some cases, the Government has allowed setting up of industry in the over-subscribed industrial sector which has further aggravated the problem of Industrial Sickness⁴².

³⁷ "Vice-President Speech in Parliament", The Bangladesh Observer. Dhaka; (July 11, (1989)).

Mosharraf Hossain, "Udar Beniag Nitir Bangladesh". The Weekly Banker. (January, (1990)). pp. 4-9.

³⁸ "Speech of Ex-Finance Minister Dr. Wahidul Huq in Parliament", The Bangladesh Observer, Dhaka; (Jan. 15, (1990)).

Saifur Rahman, "Profile of Bangladesh Economy". The New Nation. Dhaka; Sunday (March 20, (1989)).

³⁹ "Economic Stalemate: Effect on Manufacturing Employment", Press Release. Dhaka; Bangladesh Employers Association. (April 21, (1989)).

⁴⁰ "Industrial Policy to be REviewed". Dhaka; Bangladesh Observer. (January 15, (1992)).

⁴¹ The Drug and Chemical Manufacturing units included in our study complain about the difficulties created by such policy.

⁴² "Cold Storage", Editorial coment. The Daily News. Dhaka; Thursday, (December 24, (1987)).

Mr. M. Younus, President of Dhaka Chambers of Commerce and Industry expressed his resentment at the recent decision of the Government to allow import of hundred additional items into the country. In his opinion, such policy would harm the interest of local industry and make the country dependent on foreign import⁴³.

As against this, a number of studies and other legal measures have been undertaken in India by Reserve Bank of India (RBI), amendment of Income Tax and Company Law and promulgation of Sick Industrial Companies (Special Provisions) Act, 1985⁴⁴. In Pakistan also, a number of steps such as formation of Baig Committee including some financial and administrative measures have been undertaken to solve the problem of Industrial Sickness with due priority⁴⁵. Thus it is evident that pragmatic and well defined Government policy has not yet been formulated in Bangladesh to tackle the problem of Industrial Sickness.

⁴³ The Bangladesh Observer. Dhaka: (20th August, 1992).

⁴⁴ Vinod Kumar Joshi. Management of Industrial Sickness. Jaipur; Kuber Associates and Publishers, (1987). pp. 162-70.

⁴⁵ M.W. Memon, "Role of IDBP in the Rehabilitation of Sick Projects", The Cost and Management Accountant, Vol. 6, No. 2 (March-April, 1988). pp. 22-24.

I.A. Manfi, "Pakistan Industrial Credit and Investment Corporation Ltd.", ADFIAP Journal of Development Finance. Manila, Philippines. Volume 1, No. 6. pp. 3-5.

Shamim Ahmed Allawala, "Reforms in Corporate Sector in Pakistan With Special Reference to Resource Mobilisation Through Public Participation" Safa Seminar held in Kathmandu. Nepal; (June 1-3, (1990)).

c. Devaluation of Bangladesh Currency :

The strength of a country's currency determines its competitive power in the local and international market. This also affects the cost of imported raw material, fuel and other input including project cost. From time to time, a government adopts Devaluation Policy to boost export earning and enhance competitive power of the currency. So far, GOB has devalued its currency as may as sixteen times but with very little tangible gain⁴⁶. The country's import figure is four times of its export earning and prospect of higher earning appears to be remote⁴⁷.

As a result of decline in the purchasing power of local currency against powerful currencies like Pound Sterling, Dollar, Yen etc., the cost of production has almost doubled over the last one decade as a result of Exchange Rate Fluctuation of Bangladesh currency⁴⁸. Under such circumstances, the new and existing industrial enterprises are finding it very hard to finance their projects properly⁴⁹. The massive devaluation of Bangladesh currency has also produced adverse effect on the country's Balance of Payment position⁵⁰. In a seminar, it was disclosed that 55 percent of the export earning is devoted towards meeting the

⁴⁶ "Devaluation, Analytically", Editorial Comment. The Bangladesh Observer. Dhaka; (July, (1991)).

⁴⁷ Vice-President's Speech before the Fourth Assembly", Press Report. The Bangladesh Observer. Saturday (April 6, (1991))

⁴⁸ The Daily Ittefaq. Dhaka; (September 11, (1987)).

⁴⁹ "Of Exchange Rate Fluctuation", The Morning Sun. Dhaka; Wednesday (August 28, (1991)).

⁵⁰ "Peoples Republic of Bangladesh", Industrial Development Review Series. Prepared by the Regional and Country Studies Branch, Division for Industrial Studies. UNIDO. 15 IS. 510, (1985).

foreign loan service liabilities. The total amount of foreign debt amounted to Tk. 1300 Crore U.S. dollar which involved a huge debt service liability⁵¹. The precarious position of Bangladesh currency vis-a-vis other measure currencies is evident from the following table :

Table 4.1 : Value of Measure Foreign Currency Against Bangladesh Currency

as on - - - - -

Country	US\$	Pound	Mark	HK\$	Yen	S.Dollar
U.S.A.	1 dollar	0.563	1.622	7.758	27.79	1.639
Britain	1.775	--	2.875	13.77	226.89	2.90
Germany	0.617	0.347	--	4.782	78.79	1.01
Honkong	0.129	0.072	0.209	--	16.79	0.21
Japan	0.008	0.005	0.013	0.060	--	0.3
Singapore	0.610	0.344	0.989	4.733	77.97	--
Banglades	38.93	69.59	24.24	--	0.31	23.95

[Source : Bangladesh Bank]

d. Supply Position of Raw Material, Fuel and other Input :

In Bangladesh, the industrial sector consumes a large volume and variety of raw material, fuel etc. for its efficient operation. Bulk of these items have to be imported from abroad at a considerable expense of foreign currency since Bangladesh is

⁵¹ "Export Development Fund", Dhaka: Seminar sponsored by USAID Export Development Project and Bangladesh Bank (August 18, 1982).

not endowed with abundant natural resources. A regular flow of import again depends upon availability of foreign exchange and suitable import policy. If this flow of import is disrupted, specific raw material and other input falls short of demand and the price becomes very exorbitant. Imposition of high rate of customs and excise duty also makes imported raw material dearer and then smuggling is resorted to by the unscrupulous traders to make up the shortage⁵².

As a result, the availability of raw material and others input at a reasonable price becomes uncertain and the industrial units are badly affected by vicious price spiral. The shortage of raw materials and high infrastructural cost was also mentioned by Sahota as a leading cause of industrial sickness in Bangladesh⁵³.

e. **Cost and Availability of Electricity :**

Electricity is an important source of power which is very essential for keeping the wheels of an industry in motion. Any shortage or irregularity in electricity supply can lead to dislocation in production activity, high rate of idle man-hour, machine-hour which simply inflates the ultimate cost of production. One estimate shows that Bangladesh requires 2300 megawatts of power every years while the actual power generation

⁵² Gian, S. Sahota, "An Assessment of the Impact of Industrial Policies in Bangladesh", The Bangladesh Development Studies, Vol. XIX, No. 1 & 2 (March-June, 1991). p. 187.

⁵³ Ibid. p. 190.

stands at 1800 megawatts⁵⁴. This means that there exists a big gap between supply and demand for electricity in the country and has given rise to the problem of load-shedding. The cost of generating and distributing power has increased substantially since the thermal power stations use natural gas and imported fuel. As a result the tariff charge for electricity has gone up which is again based on peak-hour and slack-hour rate. The power generation system of the country also suffers from acute System Loss of 45 percent which is quite high as compared to other countries of the region.

Most of the owners of the sample enterprises complained about high cost and irregular supply of electricity. Some of them also indicated that they have to bribe the Power Development Board (PDB) personnel for ensuring regular supply of electricity. Thus it is evident that costly and irregular supply of electricity has turned out to be one of the biggest bottleneck which is hindering smooth conduct of manufacturing operation and ultimately leading to sickness.

⁵⁴ The Power sector of the country appear to be in deep crises. The current shortfall of power is about 500 megawatts which become highly critical during summer season. Out of the total power generation capacity, 500 megawatts of power can not be generated due to old power generation station, lowering of water level in the Karnapheli River and high cost of diesel and gas etc. The problem has become highly critical due to high level of System Loss and other in efficiency. One Power Development Board Report revealed that donor agencies like IMF, World Bank, ADB etc. has suspended its loan program for the last one year since the PDB has failed to curtail down the System Loss and other in efficiencies. Moreover a large number of old and dilapidated power station are awaiting repairs and renewals which could not be completed due to fund shortage. A Bangladesh Employer Association (BEA) revealed that during the period January-June, 1992, the country's industrial sector has lost 1,88,00,000 man-hour as a result of shortfall/irregularity in power supply. This is equivalent to production loss of Tk. 76,60,00,000. This figure is higher than the earlier period July-December, 1991.

f) Decline in Demand :

Persistent decline in demand as a result of economic slump can harm an industrial unit severely and impair its sales revenue earning capacity. This demand may again be domestic or foreign depending upon the nature of the commodity. An industrial unit must strive hard to gain greater share of the market through demand forecasting and market survey, vigorous sales promotion, selection of proper channel of distribution, develop proper pricing and product policy, increased Research and Development (R&D) activity, product diversification and introduction of profitable product mix.

These steps could only be initiated when an industrial organisation utilises the services of trained and qualified marketing personnel and assigns due importance to marketing function in the organisation structure. McCarthy observes that an industrial organisation must remain well-informed about the customer and the market which actually determines its success or failure⁵⁵. It is also necessary to retain competitive position in the market. In this respect, Drucker observes, "What is our business is not determined by the produces but by the consumers, by the want the consumer satisfies when he buys a product or service"⁵⁶. Thus a product market strategy have to be developed. Some of the other information which must be considered while developing such a strategy are direction of growth of market, the basic means by which it wants to compete and the manner in which

⁵⁵ McCarthy et al. Business Policy and Strategy: Concepts and Readings. 2nd ed. Homewood, Ill., Richard D. Irwin, Inc., (1983). pp. 72-75.

⁵⁶ Peter F. Drucker. The Function of Management. New York; Harper and Row, (1954). p. 50.

the various aspects of the strategy will fit together and supplement each other. A well-defined strategy will provide the purpose and focus for all other activities and enable the organisation to function successfully. It may be added here that the formulation of strategy is the beginning and these first steps are the significant determinant of its future success. A proverb says that "every long journey starts with making the first step". If these first steps are right, then the articulation of strategy will answer many vital questions regarding the type and purpose of the business activity. Drucker stipulates that "failure to ask this questions is undoubtedly the most important cause of business failure"⁵⁷. Thus a successful organisation must forecusest demand and formulate strategy to achieve the target sales figure established in the light of such forecusest.

g) **Law and Order Situation :**

Peace and tranquility in the society is a must for smooth functioning of an industrial organisation. But it is a fact that since its independence, Bangladesh has suffered badely as a result of poor law and order situation in addition to poor resources and abject poverty of the masses⁵⁸. The increased recurrence of theft, burglary, hijacking, highway robbery, extortion of money from local traders and businessmen by local hoodlums show that the law enforcing agencies are unable to quell these illegal activities. Another problem is that these unlawful acts are being

⁵⁷ Ibid. p. 50.

⁵⁸ Nurul Islam. Opcit. p. 30-35.

committed in the name of party politics and the wrong-doers are never given exemplary punishment. Many owners of industrial units informed that they are quite helpless in such situation and have to compromise with the local "mustans" which leads to heavy drainage of cash. Another cold storage owner informed that he had to dispose of his unit at a loss in the face of heavy demand for many from the local mustans. Day by day, the industrialist are finding it very hard to cope with the deteriorating law and order situation. Some positive steps by the Government and law enforcing agencies has become very urgent to check this evil propensity.

h) **Labour-Management Relationship :**

Labour is an important ingredient of production. It plays a dominant role in ensuring higher productivity and efficient operation of an industrial enterprise⁵⁹. A cordial relationship between labour and management referred to as Industrial Relation is essential for smooth conduct of manufacturing operation⁶⁰. But in reality this objective could hardly be achieved since the relationship becomes strained due to dispute between the concerned parties. One estimate by the Bangladesh Employers Association revealed that the total loss to the national economy arising out of strike stands at Tk. 45 crore per day which is lines, gherao of officers etc. has taken place in the country's

⁵⁹ Gian S. Sahota; "Productivity and Economic Development in Bangladesh", Paper given as the Semanar on Productivity Movement in Bangladesh. Dhaka; MPO-ILO, 1989. (October 23, (1989)).

⁶⁰ R.S. Davar. Personnel Management and Industrial Relation. 8th ed. New Delhi; Vikas Publishing House Private Ltd., (1983). pp. 301-29.

indeed a very staggering figure.

From time to time, the labourers agitate strongly by declaring strike and other acts of non-cooperation solely with the intention of realising their demand from management. Over the years, so many acts of violence including general strike, blocking of highway, uprooting railway industrial sector and caused havoc to the national economy. In view of the massive scale of labour agitation, the Government had to yield to the demand of the workers and accordingly granted wage hike, doubled of gratuity benefit and other financial concessions. Some labour law provisions have also given the workers an upper hand as compared to the management⁶¹. For example a dismissed worker could get himself elected as the Collective Bargaining Agent (CBA) and sit with the management in the negotiation table.

Another instance of such annomally is that a discharged worker gets a higher financial relief as compared to a retired worker having a good service record. The owners of the sample industrial units strongly felt that such annomalies are causing a great problem for them and they are unable to meet the increased demand of the workers in the face of declining sales revenue. They are also of the view that labour unrest is no longer a simple problem and has taken the shape of millitant trade unionism. As a result, the Adamjee Jute Mill has turned into a battle ground between rival group of workers. The law and order situation has deteriorated to such an extent that the Parliament

⁶¹ G.S. Sahota et al. Impact of Policies: Evidence from the Survey of Industrial Leaders", HIID/ESEPP Working Paper No. 19.

Members were compelled to take part in a heated debat on the subject of law and order situation often in Bangladesh. An anti-terrorist ordinance has been promulgated by GOB to tackle the situation but there has been no sign of improvement. This is indeed a very big problem which is retarding the healthy growth of industry in Bangladesh.

i) **Inefficient Transport and Communication :**

Efficient transport and communication helps in attaining increased geographical mobility and facilitate free flow of goods and people between various parts of the country. The industrial sector is heavily dependent on efficient road, railway, waterway and postal and telegraph system. In Bangladesh, the transport and communication system has improved to some extent but they are inefficient and costly. The charges for their services are going up rapidly and most of the main transit points, railway junction, ferry ghats remain blocked due to outbreak of violence between rival factions of road transport workers union. Frequent incidents of traffic jam are also adding to the inefficiency of road transport system. The services of Postal, Telephone and Telegraph Department is also not upto the mark and charges are very high. The management of the sample industrial units have also expressed their dissatisfaction with existing transport and communication system because of its high cost and unreliability.

(j) Support from DFI and infrastructural development agencies:

The DFI's and infrastructural development agencies like Power Development Board (PDB), Water Development Board (WDB), Public Works Department (PWD) has a great responsibility in ensuring industrial growth in the country. Any failure or lapse in providing the required services in the form of quick disposal of loan application and follow-up of prpjects, provision of gas, water, power, telephone and improved metalled road may put an industrial unit in a disadvantageous position and obstruct its proper functioning. Professor Khandwalla has shown in one of his research paper that the DFI's contribute a lot towards the sickness of an industrial unit⁶².

In Bangladesh services of BSB in terms of project preparation, financing, supervision and fulow up has been found to be quite unsatisfactory in course of a study⁶³. Agencies like PDB, T&T etc. have also not been very prompt and efficient in providing the necessary service facilities. The applicants have to wait for months together to get the service facilities like electricity, gas, water, telephone etc. Government sources claim that the services have improved considerably but owners of sample units informed that bottlenecks continue to exist. As a result both the new and existing industrial units are suffering badly as a result of powr services of DFI's and infrastructural development agenices.

⁶² Pradip N. Khandwalla, "What Can Financial Institution Do to Prevent Corporate Sickness". Vikalpa. Vol. 13, No. 2, (April-June, (1988)) pp. 11-23.

⁶³ Kazi Ahmed Nabi. Problems of Project Appraisal and Implementation of the Development Financial Institution of Bangladesh. Heidelberg: Department of Agricultural and Applied Economics, South Asia Institute, University of Heidelberg (1988).

Comment :

In the preceding paragraphs an attempt has been made to highlight some of the external factors which are posing a serious problem for the industrial units of Bangladesh. Almost all the sample industrial units were found to have been adversely affected by these problems. A close look at the problems clearly show that they are hardly controllable and an industrial unit must learn to live with the same. Mere complain or talk about the problem are not going to solve them overnight. The best way of tackling these problems is to accept them as a fact of life and devise some pragmatic way of overcoming/reducing the intensity of such problem. In one study, the textile mill owners of Gujrat, India complained about shortage of power while the state had a very satisfactory record of power generation and distribution and the system loss was about 3 percent⁶⁴.

This means that mere shortage or abundance of certain ingredient is a very relative matter. Given the good intention, ability and willingness of the entrepreneurs in running their own industrial unit efficiently and profitably, the problem as enumerated above could not nbe a serious one. The only thing that matters over here is constasnt scanning of the external environment by management and find solution to the problem.

⁶⁴ Nalini S. Dave. op cit. pp. 125-30.

4.7 Internal Environmental Factors :

The internal environment represents the management including its four major functional area namely finance, production, marketing and personnel which is the chore of the industrial organisation. The following paragraphs enumerate the above points further.

An industrial organisation is essentially a vehicle for the attainment of certain economic and financial objective⁶⁵. It operates within a given soci-political and economic environment which is full of risk and uncertainty⁶⁶. In order to succeed, an industrial organisation needs the services of an efficient management which strives hard to attain a 'steady-state' with the external environment through minimising risk and maximising ROI⁶⁷. In the opinion of Professor Stanford, a healthy industrial organisation must have a definite objective meaning where it wants to go (ends) and a well defined strategy meaning how it wants to go there (means)⁶⁸. The following diagram depicts an industrial organisation and its various environmental aspects :-

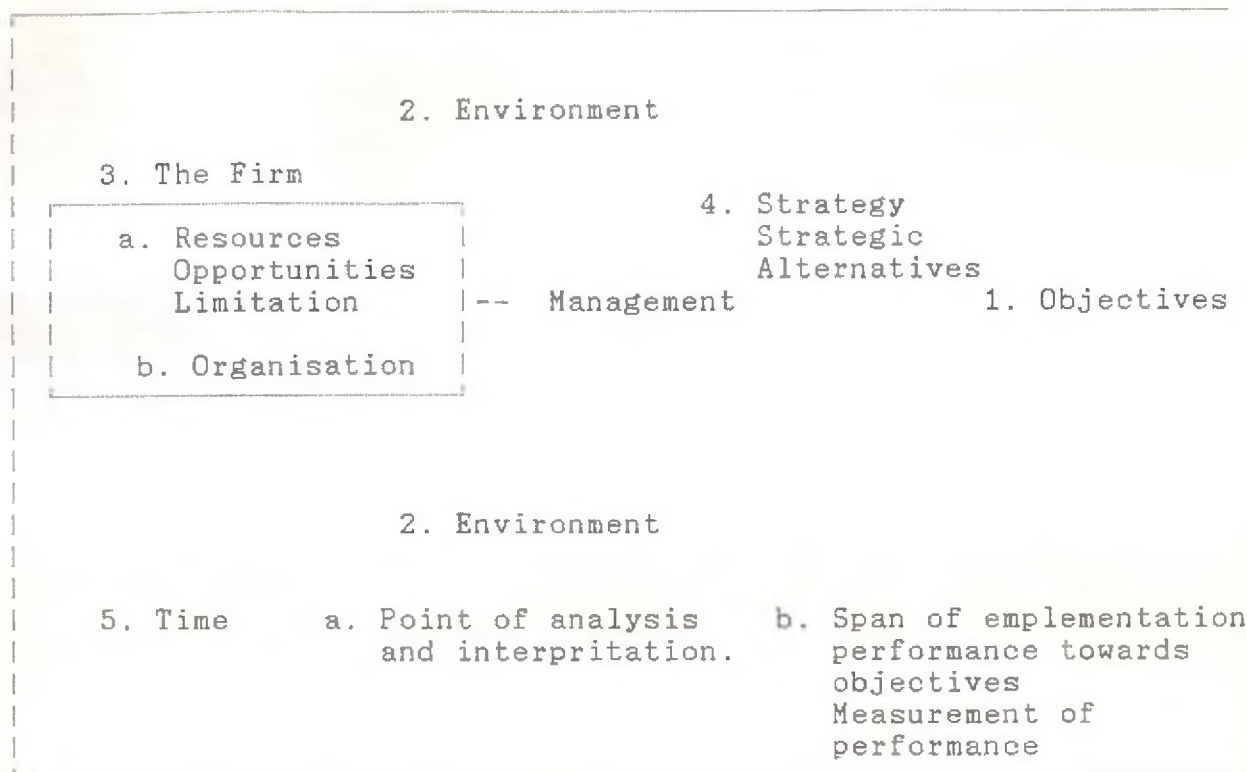
⁶⁵ Stephen H. Archer and Charles A D'Ambrosio. Business Finance: Theory and Management. New York: The Macmillan Co., (1966). p. 22.

⁶⁶ Elwood S. Buffa. Modern Production Management. 4th ed. New York; John Wiley & Sons Inc., (1975). pp. 19-21.

⁶⁷ George A. Arragon. A Managers Complete Guide to Financial Techniques: An ROI Framework for Performance Appraisal. New York; The Free Press, (1982). pp. 9-10.

⁶⁸ Melvin J. Stanford. New Enterprise Management. Reston, Virginia: Reston Publishing Company, (1982). pp. 2-4.

Diagram No. 6: The environmental aspects of an
Industrial Organisation



[Source:⁶⁹ Melvin J. Stanford. Management Policy. Englewood Cliffs, N.J.: Prntice-Hall Inc., (1979)p. 11.]

It is quite apparent here that for the accoplishment of an objective, an industrial organisation must have a well-defined plan and a stratgy. Planning is the basic of all management function and represents the blue print for future course of action. Pearce⁷⁰ observes that while formulating the objectives and plans, the decision-maker must determine the basic goal, characteristics and philosophies that would shape the strategic posture of the firm. For this purpose, a company mission has to

⁷⁰ John A. Pearce, "The Company Mission as a Strategic Tool" in Business Policy and Strategy: Concepts and Readings (eds) Daniel J. McCarthy, Robert J. Minichello and Josheph H. Cuman. 3rd ed. Homewood. Ill: Richard D. Irwin Inc., (1983). p.79.

be drown up which is a comprehensive statement about a company's objective including its principal product, service areas and the primary customer needs it wishes to satisfy. One author emphasises the importance of strategy as follows :

"An organisation without strategy is just like an aeroplane weaving through stormy skies, hurdled up and down, stormed by the winds, lost in the thunderheads. If the lightning or storm does not destroy it, it would simply run out of gas. Without an explicit assumption about the long-range future and strategic guidelines for dealing with them, even the large and secure organisation faces disaster in a period of revolutionary technological and economic turbulence"⁷¹.

It may be noted here that an efficient managemnet alone can take care of such turbulent environment through formulation of plans, strategies and efficient discharge of basic function like finance, production, marketing and personnel. Professor Koontz attaches great importance to managemnet in relation to an industrial organisation in the following words :

"Although the organisation of human being for the attainment of certain objective is age old, the science of management is a new development. After World War II, there has been an increasing awarness that quality of management is important to modern life and this has resulted in the extensive study and analysis of management process, its environemnt, its techniques."⁷²

It would be quite illogical to assume here that importance of management is confined to the developed countries alone. It is

⁷¹ Alvin Toffler. The Adaptive Corporation. New York; McGraw-Hill Book Company, (1985). pp. 171-72.

⁷² Koontz et al. Op cit. p. 7.

equally vital in the context of a developing country which is apparent from the observation of Professor Koontz and his colleagues :

"The importance of management is no where better dramatised than in the case of an underdeveloped or developing country. Review of the problem in recent years by economic development specialists has shown that provision of capital and technology does not ensure development. The limiting factor in almost every case has been lack of quality and vigour on the part of management."⁷³

The importance of the valuable services of a professionally-oriented management team is apparent from the observations of Dale Carnegie an industrialist of repute. He said :

"If you take away my plants, my customers, my capital, infact the whole physical setup, but left me my management team, I could re-establish myself in a matter of few years"⁷⁴.

In the opinion of Argenti,⁷⁵ a bad management leads an industrial enterprise towards failure or sickness through its wrang action and decisions. Some of the important characteristics of bad management as enumerated by Argenti are :

- (a) One-man rule (not necessarily a one-man business);
-

⁷³ Ibid. p. 7.

⁷⁴ Md. Habibullah. "Development of Management and Executive Personnel", Administrative Science Quarterly. Vol. 1, No. 4 (December (1967)) p. 54

⁷⁵ John Freear. The Management of Business Finance. London; Pitman Publishing Company, (1980). p. 349.

- (b) an unbalanced management in the financial and personality sense;
- (c) a weak financial function;
- (d) a company in which the Chairman and the Chief Executive are the same person.

Explaining the role of bad management, Argenti further observes :

"If the management of the company is poor, then two things will be neglected, i.e. accounting information system will be neglected and the company will not respond to changes. Poor managers will make three other mistakes. They will over-trade or they will launch a big company that goes wrong or they will allow the company's gearing to rise so that normal business hazards become a constant threat. These are the chief reasons—neither fraud nor bad luck deserves a passing mention. One of the most important symptom is that certain financial ratios will deteriorate and as soon as they do, the management will start creative accounting"⁷⁶.

When the performance of the sample enterprises ^{was} were evaluated against the above features of bad management, it was found that their management competence was very poor and showed no sign of improvement. They credulously hoped that everything will be all right in due course of time and no detailed planning and strategy is necessary. They were also very slow in responding to the external changes and paid very little attention towards regular monitoring of their performance with the help of accounting ratios. This state of affair fully conforms to the findings of Professor Habibullah⁷⁷ who stipulates that planning is a very

⁷⁶ Ibid. pp. 350-51.

⁷⁷ M. Habibullah. "Management for Results", Paper presented at the Seminar on Management: Bangladesh Way. Dhaka; (May, (1989)) p. 15-18.

neglected activity and there is a complete absence of long-range-planning. The management practice as prevailing in Bangladesh is characterised by "management by crisis". This means that when management become necessary, it is simply undertaking to meet emergency situation. Thus the absence of systematic management spelled disaster or sickness for the sample industrial units. /

Financing

It is an important functional area of management. An industrial organisation tends to become sick if sufficient financial resources are not acquired and channelised towards productive investment. In the connection Terry observes, "Financing is an important field of economic activity and it is of canonical importance in organised economic activity"⁷⁸. Kumar holding similar views further adds that "finance is the nerve-root of any business that keeps it vital and working"⁷⁹. Pointing towards the need for provision of such valuable financial resources, Howard and Upton observes :

"Financial management involves planning for the raising, controlling and disposing of each resources of a particular unit to the task of furthering its objective and maintain the most satisfactory relation possible between the resources and the claim against the resources. The basic financial principle flows from the profit motive. ... Thus maximum volume of resources with maximum margin of profit and a minimum investment in assets spells maximum earning power"⁸⁰.

⁷⁸ George R. Terry. Principles of Management. Homwood; Ill: Richard D. Irwin Inc., (1964). p. 587.

⁷⁹ V. Ambeli Kumar. Working of Small-scale Industries in Kerala. Unpublished Ph. D. Dissertation. Madras; Department of Commerce, Univ. of Kerala, (Nov., (1989)). p. 140.

⁸⁰ Bion B. Howard and Miller Upton. Introduction to Business Finance. New York, McGraw-Hill, (1953). pp. 8-9.

Efficient management of finance again depends upon proper financial planning. Explaining the point further, Kulkarni observes:

"In order to formulate such plan, management must know his immediate position. Like a doctor, he must know the condition of his patient before prescribing a remedy. You would not launch a financially weak company on a programme of expansion and heavy promotional activity any more than you would send out a patient with a heart condition to do two hours of work each morning. In short, finance must fit the financial capacity of a firm"⁸¹.

Financial planning mainly involves economic procurement and profitable utilization of the fund which could only be achieved through realistic investment decision. It also involves the thorough analysis of economic, industrial and share-market position. In this regard, Bond observes as follow :

"While earning profit is the mark of a corporate success, money is the energizer, which makes it possible. The aim of financial planning should be to match the needs of the company with those of investors with a sensible gearing of short and long-term fixed interest bearing securities"⁸².

Therefore, every viable business organisation must have a well planned Capital Structure and Capitalisation Plan. Here the former one refers to the composition of various types of funds in the proposed capital of a company⁸³ and the latter one refers to

⁸¹ P.V. Kulkarni. Financial Management. 3rd ed. Bombay; Himalaya Publishing House, (1985). pp. 88-89.

⁸² G.D. Bond. Corporate Finance for Management. London; Butterworths Limited, (1974). pp. 118-20.

⁸³ B. Bannerjee. "Capital Structure Trend in India", Lokudvog (September, (1984)).

the sum total of equities including short-term securities and other long-term funds from the DFI's and Banks⁸⁴. For the purpose of drawing such a plan, a manager must know the sources of short and long-term funds, their merits and demerits, the Cost of Capital, the type of capital and other related matters.

The long-term fund requirement of an industrial unit can be determined by evaluating the fixed assets and working capital requirement and the ultimate profitability of operation⁸⁵. Therefore capitalisation should be fixed at such an amount which is warranted by the profit margin and the normal rate of return in the industry concerned.

The determination of a balanced capital structure depends upon cost of capital. It refers to the cost which has to be paid for making use of external funds and it is also known as minimum rate of return or cut-off point⁸⁶. The management should accept an investment plan where the rate of return exceeds the cost of capital and reject in the reverse case⁸⁷.

The Capital Structure of a company comprises of debt and equity capital. Kulkarni observes that long-term liquidity

⁸⁴ N.L. Hengorani and A.R. Ramanathan. Management Accounting. 4th ed. New Delhi; S. Chand and Sons, (1983). p. 548.

⁸⁵ Ibid. pp. 548-49.

⁸⁶ Ibid. p. 549.

⁸⁷ F. Modigliani and M.E. Miller. "The Cost of Capital, Corporation Finance and the Theory of Investment", American Economic Review; (June (1958)).

G.D. Roy. "The Concept of Cost of Capital," The Management Accountant; (September (1972)). pp. 554-55.

depends upon profitability of operation but whether it survives to attain long-term profitability depends upon Capital Structure⁸⁸. Thus considerable care and caution should be exercised while developing the same.

The capital structure of a weak and deficient unit usually manifests four types of deficiencies e.g., Under-capitalisation, Over-capitalisation, Under-trading and Over-trading. The experts argue that the root cause of all types of financial problem originates from and ill planned capital structure which leads to decline in ROI, lower cash Flow increased riskiness of EBIT and a deficient liquidity and profitability position⁸⁹. The following table summarises the various deficiencies of Capital Structure and their leading symptoms:

Table 4.1 : Capital Structure and leading symptoms

Deficiencies of Capital Structure	Leading Symptoms
<p>1. <u>Over-capitalisation</u> A company is regarded as over capitalised if (a) The capitalisation exceeds the real economic value of its assets, (b) a fair return is not realised on capitalisation and (c) the firm has excess net assets.</p>	<p>1. Low fixed assets turnover 2. Poor return on capital Employed. 3. Low Capital Turnover Ratio. 4. High Turnover Ratio.</p>
<p>2. <u>Under-capitalisation</u> implies that the company has insufficient fund and it is trying to maintain a high level of sales activity with a poor equity base.</p>	<p>1. High Capital Turnover Ratio. 2. Large fixed assets turnover Ratio. 3. Low current Ratio. 4. Acute shortage of working capital.</p>

⁸⁸ P.V. Kulkarni. Op cit. pp. 363-67.

⁸⁹ J. Robert Lindsay and Arnold W. Samatz. Financial Management; Rev. ed. Homwood. Ill: Richard D. Irwin Inc., (1967). pp. 319-21.

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|--|---|
| <p>3. <u>Over-trading</u> takes place when one enters into a big contract for short selling or buying large stock in the hope of making a profit but which is not backed by adequate resources.</p> | <p>1. Low current Ratio.
2. High Turnover Ratio.</p> |
| <p>4. <u>Under-trading</u> means Keeping large sum of money idle and failure in making efficient use of the same. This leads to under-utilisation of installed capacity, non-recovery of fixed cost burden, high cost of production and inventory carrying cost.</p> | <p>1. Poor return on capital Employed.
2. Large-inventory, sundry debtors and cash balance
3. Low Sundry Creditors.
4. High current Ratio.
5. Low turnover Ratio.</p> |
-

The proportional relationship which exists between the shareholders fund and long-term fund is known as Financial Leverage or Gearing⁹⁰. It indicates the policy of Trading on Equity and reveals the degree of risk associated with investment in the company⁹¹. When a company incorporates large amount of fixed interest-bearing securities in its capital structure as compared to the shareholders equity, it is regarded as highly geared⁹². Hingorani observes that four risk situation might arise due to reckless use of Financial Leverage. They are :

- (a) High Operating Leverage and High Financial Leverage
- (b) High Operating Leverage and Low Financial Leverage
- (c) Low Operating Leverage and Low Financial Leverage
- (d) Low Operating Leverage and High Financial Leverage.

⁹⁰ M.Y. Khan and P.K. Jain, Financial Management. New Delhi; Tata McGraw-Hill Publishing Co. Ltd., (1981). pp. 445-47.

⁹¹ Prasanna Chandra, Financial Management and Practice. New Delhi; Tata McGraw-Hill Publishing Co. Ltd., (1984). pp. 109-12.

⁹² R.L. Gupta and L. Radjaswamy, Financial Statement Analysis. New Delhi; S. Chand and Sons, (1982). pp. 27-32.

Here (a) and (c) represents cases of high and low risk situations respectively. Situation (b) is less risky but it is not at all useful in augmenting ROI. Since market is beyond any body's control, it is preferable to have a low Operating Leverage (so that profit would not be decreased too much and high Financial Leverage (so that the benefit of Trading in Equity could be reaped)⁹³. Thus ample care should be exercised at the time of developing financial planning, policy and strategy which is the best means of minimising risk and maximising return. All the sample units under study performed poorly in financial field.

Production :

Once the financial problem are taken care of then comes the problem of production. It is the focal point of all other management function like procurement, sales stores keeping, inventory control, budget preparation etc. The overall success of an industrial organisation depends upon efficient discharge of production management function. The task of production management may be represented as a system whose diagram is shown in the following page⁹⁴.

⁹³ Hermanson et al. Op cit. pp. 194-95.

S.C. Kuchhal. Financial Management. Allahabad; Chaitanya Publishingouse, (1985). pp. 106-117.

⁹⁴ E.H. Bowman and R.B. Fetter. Analysis for Production Management. Rev. ed. Homewood; Ill: R.D. Irwin Inc. (1961). p.40.

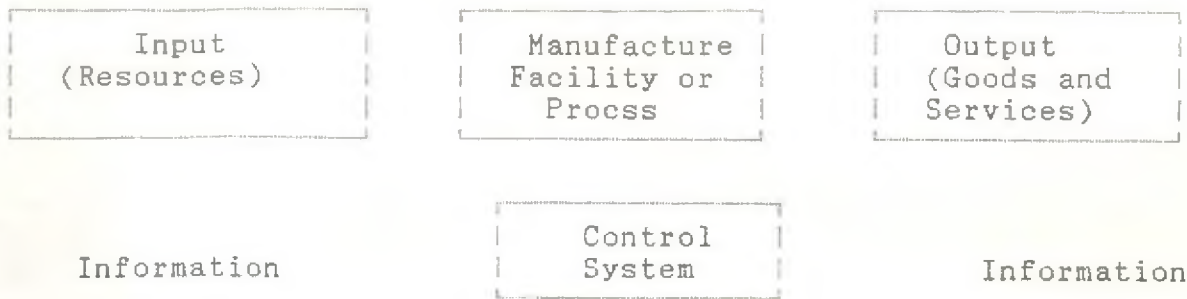


Diagram No. 7 : Manufacturing as an Input-Output System.

Buffa defines the term Production Function and Production Management as follows :

"Production is a process by which the goods and services are created. ... Production Management deals with decision-making relating to the production process so that resulting goods and services are produced according to specification in the amount, by the schedule demanded and at a minimum cost. ... Production Management is concerned with two basic areas of activities, the design and control of production system"⁹⁵.

It must be remembered here that Production System could be maintained at a steady-state level only thorough ensuring regular supply of resources and speedy disposal of goods and services. Efficient discharge of this vital management function spells earning power of an industrial organisation and is widely regarded as the gauge and measure of its success. The sample industrial units miserably failed to demonstrate any efficiency in this vital functional area and followed no elaborate Production Planning and Control System.

⁹⁵ Elwood S. Buffa. Models for Production and Operations Management. New York; John Wiley & Sons, (1963). pp. 150-55

Marketing :

A crisis situation is likely to arise if the end-result of production, e.g. goods and services are not sold out at a reasonable rate. One of the best and widely used approach towards solving such problem is proper marketing of the finished product⁹⁶. Thus marketing or sales promotion effort should be programmed and directed in such a way so that the goal of higher sales revenue could be accomplished⁹⁷. Kakkar observes that marketing function could be effective when two important aspects namely marketing analysis and forecasting are incorporated in it⁹⁸. Chakraborty⁹⁹ and Gupta¹⁰⁰ in their study has demonstrated that a planned and aggressive marketing could save a sick company from ruination.

Deficient marketing function has already been mentioned as an important causes of Industrial Sickness. It has also been fund that small and medium sized companies lack the expertise and

96 Larry J. Rosenberg. Marketing. Englewood Cliffs, N.J. Prentice-Hall Inc., (1977). p. 9.

97 Philip Kotler. Marketing: Analysis, Planning and Control. Englewood Cliffs; NJ. Prentice-Hall, Inc (1972). pp.26-30

R.D. Agarwal. Organisation and Management. New Delhi; Tata McGraw-Hill Publishing Company Ltd., (1982). pp. 255-60.

98 P. Kakkar. "Marketing Input for Sick Industries", in Industrial Sickness and Revival in India. (eds) S.K. Chakraborty & P.K. Sen. Calcutta; Indian Inst. of Management, (1980).pp.162-79.

99 P. Chalraborty. "Revival of a Sick Industrial Unit: A Case Study of an Engg. Unit in West Bengal." The Management Accountant. Vol. 20, No. 2 (Feb., (1985). pp. 89-93.

100 L.C. Gupta. "Management Style-The Key to Revival from Sickness", in Industrial Sickness and Revival in India. (eds) S.K. Chakraborty and P.K. Sen. Calcutta; Indian Institute of Management, (1980). pp. 143-61.

resources to improve marketing function and hence are unable to compete with large organisation.

Therefore all possible measures such as efficient procurement of input, proper storage, R & D activity, product development and product diversification, quality control, inventory control technique should be adopted for smooth conduct of marketing operation. The sample units covered by the study suffered from high incidence of under capacity utilization, high inventory level, declining sales, idle man hour, machine hour etc. which means that they are very deficient in the marketing area.

Personnel :

Suitably qualified and trained personnel is one of the most important resources available at the desposal of an industrial organisation¹⁰¹. Likert substantiates its importance in the following wards :

"All the activities of an enterprise are facilitated and determined by the persons who make up the institution, plant, office, computer, automatic equipment and all else that a modern firm uses are unproductive except for human effort and direction. ... Of all the tools of management, managing human resources is one of the most crucial and important task because all else depends upon how well it is done"¹⁰².

¹⁰¹ L.A. Appley. Management in Action. New York; American Management Association, (1956). p. 19.

¹⁰² R. Likert. The Human Organisation-its Management and Value. New York; McGraw-Hill Book Company, (1967). p. 1.

Professor Flippo observes that the personnel function occupies a very vital position in an industrial unit as they are instrument of the firm, a human-being and a citizen¹⁰³. Thus a Personnel Manager should be very much concerned with the operation of both the employees and the society at large¹⁰⁴. The constructive role of a Personnel Manager has also been recognised by all concerned¹⁰⁵. The job of a Personnel Manager has become a challenging and difficult one with the rise of trade union movement, formulation of Labour Law, increase in the size and complexity of organisation and technology and the demands made by the less privileged segment of the society¹⁰⁶.

Even if the society permits the use of its citizen for the attainment of organisational goal, one must not lose sight of the fact that they constitute an instrumental work force. The employees are basically human-being who possess (a) certain inalienable rights and (b) citizens with certain rights and privileges. Under the new role, the Personnel Manager has to play the dual role of Keeper's of organisation's conscience and an informed specialised¹⁰⁷. He must try hard to ascertain and accommodate the needs of the workers and other members of the

103 E.B. Flippo. Personnel Management. 6th ed. New York; McGraw-Hill Book Company, (1984). p. 3-4.

104 R.W. Monday and R.M. Noe. Personnel: The Management of Human Resources. Boston; Allyn and Bacon Inc., (1981). pp. 30-32.

105 R.D. Agarwal (ed). Dynamics of Personnel Management in India. New Delhi; Tata McGraw-Hill Pub. Co. Ltd. (1973). pp. 8-9.

106 H.M. Dicks. "Personnel Administration" in H.B. Maynard (ed). Handbook of Business Administration. New York; McGraw-Hill Book Company, (1967). pp. 11-25.

107 Edwin B. Flippo. Op cit. p. 3.

society by initiating suitable plans and programmes¹⁰⁸.

Every organisation large or small must have suitable personnel policy regarding selection, recruitment, training of workers, wages and salary administration, grievance handling, industrial relation etc.¹⁰⁹. Over and above, a suitable Management Development Programme should be initiated in the organisation to ensure a regular supply of trained and qualified personnel of all category¹¹⁰.

In respect of personnel function also, the sample industrial units were found to be very deficient. In short, the personnel function was not given its due importance and well-conceived policy regarding important areas of personnel were lacking. Thus there is ample reason to believe that neglected personnel function were largely responsible for the sickness of the sample industrial units.

Comment :

The owners of the sample industrial units as covered by the study showed all the signs and symptoms of management inefficiency. Some of them are poor respond to dynamism of external

108 Paul Pigors and Charles A. Myers. Personnel Administration. Tokyo; McGraw-Hill International Books Company, (1983). pp. 108-23.

109 S.A. Huq. Personnel Management. 1st d. Dhaka; M/S Huq & Sons, (1981). pp. 50-60.

110 R.S. Davar. Personnel Management and Industrial Relations. 8th ed. New Delhi; Vikas Publishing House Private Ltd., (1976). pp. 134-58.

environment, slow and irrational decision making, unconcerned attitude towards labour problem, adverse movement in the market etc. They were also very deficient in the functional areas of management namely finance, production, marketing and personnel. Another appalling feature of the poor attitude of the management is that they made no positive and concerted attempt to become aware of the coming shape of things through accounting ratio calculation and analysis. They also tried to maximise their financial gains by getting the job of an accountant done by a less qualified accountant. Such policy prevented them from making optimum use of the expertise of a qualified accountant who could have furnish them with the right information and thus avert Industrial Sickness.

4.8 Chapter Summary :

The environmental factors (both internal and external) are an important determinant of the sound health of an industrial organisation. This chapter attempted to lay emphasis on these factors which must be taken into active consideration by the management. An analytical treatment of the risks, life cycle and system characteristics of an industrial organisation was undertaken which gave a vivid idea about their influence on its growth and survival. It was found that pragmatic financial decision have to be made during appropriate stage of the life cycle of an industrial organisation.

With a view to asses the impact of the external environmental factors on the sample units, the MD's and CE's were

asked to comment on the causes which tended to push their organisation on the verge of sickness. It emerged in course of the study that raw material shortage, power supply problem, low value of Bangladesh currency, law and order situation, overnment policy and lack of support from banks, DFI's and other agencies accounted for majority of sickness in industry.

In the same way, the management of the sample enterprises were very poor in major functional areas like Finance, Production, Marketing and Personnel. Deficiency in these fields accounted for 70 percent of the sickness among the sample enterprises. This disappointing performance can only be reversed by attaining substantial improvement in management practice and ethics.

Chapter - V

Analysis and Interpretation of Collected Accounting Data

5.1 Introduction :

As the caption of the study suggests, the main focus was placed upon identification of the various causes of sickness in the selected industrial units mainly through the analysis of the financial statement data. For this purpose, the collected financial Statement^s or Annual Accounts Report^s was thoroughly analysed and 26 vital accounting variables were extracted. (See Appendix 9). Since Financial Statement Analysis is a art rather than science it has been decided to apply ratio analysis technique coupled with analysis of accounting practices and non-financial information.

The Financial Statement Analysis is largely a study of variation between items appearing in it. Whenever there occurs a disproportionate variation, the analysis has to find a plausible reason behind the same. Such variations indicate inherent weakness in the financial structure of an industrial unit. According to Myer, an analyst must be able to recognise the ailment of a business enterprise just as a doctor is able to diagnose the symptom of human ailment¹.

For a precise diagnosis of the underlying causes of financial weakness which leads to sickness, it has been decided to analyse the following items:

¹ John N. Meyer. Financial Statement Analysis, 4th ed. New Delhi, Prentice-Hall of India Private Limited (1974). pp. 204-05.

- a. Receivables ✓
- b. Inventory ✓
- c. Fixed Assets ✓
- d. The Equities ✓
- e. Net Income. ✓

A review of the previous research works showed that emphasis has been placed on item no. (b-e). Accordingly, it has been decided to examine in details each of the points mentioned above. The analytical procedure followed in carrying out the study is given below :

A. Analysis of Vital Financial Statement Data

I. Income Statement

- (a) Gross Profit
- (b) ~~KBIT~~ 9
- (c) EAIT ✓
- (d) Retained Earnings

II. Balance Sheet

- (a) Working Capital
- (b) Net Worth

B. Evaluation of Financial Accounting Practices

I. Accounting Principle Disclosure

- (a) Inventory Valuation ✓
- (b) Asset Value Appreciation

(c) Qualified Audit Report.

II. Financial Policy

- (a) Geared Capital
- (b) Dividend Policy
- (c) Depreciation Policy.

C. Financial Ratio Analysis

- (a) Univariate Approach
- (b) Multivariate Approach.

D. Analysis of non-financial information.

E. Expert Opinion Survey

The above points are discussed as follows :

5.2 Analysis of Vital Financial Statement Data :

It has already been mentioned that Industrial Sickness is a gradual process and are reflected in the operating results of a concern. The desirability or otherwise of the operating results are reflected in the Manufacturing Account, Profit and Loss Account and Balance Sheet². This can be ascertained by examining the trend of the ratios or absolute figure. Such trend may again be positive or negative. While positive trend is considered desirable, a negative trend clearly indicates that financial crisis is imminent. Some of the potential symptoms of such

² L.R. Laurent, "Improving the Efficiency and Effectiveness of Financial Ratio Analysis", Journal of Business Financial Accounting. (1979), p. 401.

financial crisis are working capital deficiency, declining Gross Profit, EBIT, EAIT, Retained Earning and erosion of Net Worth. The magnitude of these important accounting variables provides some valuable clues towards financial difficulties face by a company. The overall position of the sample companies in respect of the foregoing accounting variables are shown in the following table :

Table 5.1 : Important Accounting Variables and the Position of the Sample Units

Accounting Variables Indicating Areas of Deficiency	No. of Companies Affected	No. of Companies Not Affected
Income Statement		
1. Gross Profit	08 [34%]	16 [66%]
2. EBIT	13 [54%]	11 [46%]
3. EAIT	14 [58%]	10 [42%]
4. Retained Earning	14 [58%]	10 [42%]
Balance Sheet		
1. Working Capital	15 [62.5%]	09 [37.5%]
2. Net Worth	09 [37.5%]	15 [62.5%]

[Figures in the parenthesis indicate percentage]

It is quite aparent here that all the sample companies were suffering from serious financial difficulties which may be termed as the forerunner of Industrial Sickness. It started with inadequate Gross Profit and eventually ended up with working capital deficiency. Some of these points are discussed on the following paragraphs :

1. **Gross Profit** : This useful figure of earning of an industrial concern can be arrived at by deducting Cost of Goods Sold from the annual sales revenue³. For the sake of maintaining a good financial health, it is very much imperative that an industrial unit must earn sufficient amount of Gross Profit⁴. This amount should yield a comfortable profit margin after meeting all charges and expenses. Here we find that as many as 8 industrial units suffered from low Gross Profit Margin which accounted for 34 percent of the sample companies.

The Gross Profit position of the sample companies is given at the end of the chapter.

Thus it is apparent here that out of six important indices of financial health, four of them namely Gross Profit, EBIT, EAIT and Retained Earning are the by-product of good earning power of an industrial organisation. The good health of such organisation is very much dependent on the quality of earning. If it fails to attain and maintain a desirable level of earning, its viability and strength would be drained away very soon leading to sickness⁵. Analysis of failure trend showed that most of the corporate failure is preceded by a declining trend in earning. Such decline in earning adversely affects short-term requirement of cash for current operation and longterm requirement of funds

³ John N. Myer. Financial Statement Analysis 4th ed. New Delhi, Prentice-Hall of India Private Ltd., (1974). p. 46.

⁴ Ibid. pp. 147-55.

⁵ L.C. Gupta. Monitoring Corporate Sickness with the Help of Financial Ratios. New Delhi; Oxford University Press, (1986). pp. 13-14.

for expansion⁶.

Professor Gupta emphasised the fact that the normal health of n industrial organisation is not only reflected but also determined by the health of its earning. He further observes :

"... A healthy earning do more to provide opportunities to other categories to be more healthy than other factors, Capable men cannot be employed unless the company has the means as well as the promise of better things. Financial condition can seldom be kept healthy and an enterprise certainly cannot reward its stockholders, finance its Research and Development (R&D) and even provide adequate production, and sales technique unless it has healthy earning⁷.

The importance of earning is so great that an industrial organisation may fail as a result of inadequate return on Total Capital Employed (ROCE) for a longer period of time⁸. It may be added here that an adiquate earning is determined by Net Operating Income and operating Assets and optimum result can be achieved by maximising them. The earning power of an enterprise depends upon rapidity of turnover and operating Profit Margin achieved⁹. A good idea regarding the earning power can be achieved by converting all the items of Profit and Loss Account as percentage of sales revenue. It clearly shows the sources of income and apportionment of expenses and the amount of retained earning that remains in the business after meeting all charges,

⁶ R.F. Salmonson et al. A Survey of Basic Accounting. Homewood; R.D. Irwin Inc., (1977). pp. 162-63.

⁷ L.C. Gupta. Opcit p. 13.

⁸ Ibid. p. 13

⁹ Howard and Upton. Opcit. pp. 149-53.

expenses and cost¹⁰.

The expression "adequate earning" depends upon conditions peculiar to a business enterprise; whether it is a new or established enterprise or whether technological change is characteristic of its area of operation, the nature of competition in the market, the nature of fixed and variable cost, the elasticity or otherwise of the demand for its products the comparative dependence upon capital or volume of operation, the comparative scarcity of labour and other input or likelihood of revolutionary government action¹¹.

The success of an industrial enterprise rests heavily on its ability to attain and maintain a reasonable degree of liquidity and propitability. Achieving both the objective depends upon adequacy of earning¹². Legal Failure which is the forerunner of actual sickness is an immediate and outright manifestation of income inadequacy¹³.

The profitability of a business concern depends upon the adequacy of earning known as "Earning Power". The term "Earning Power" may be defined as the ability of a given investment to earn a return from its use. In order to measure such ability, it is necessary to compare the prevailing rate of earning with other

¹⁰ John N. Myer. *Opcit.* pp. 135-40.

¹¹ Paul M. Van Arsdell. Corporation Finance: Policy, Planning Administration. NY; The Ronald Press Company, (1968). pp. 301-302.

¹² S.C. Kuchhal. Financial Management: An Analytical and Managerial Approach. Allahabad; Chaitannya Publishing Press, (1982). pp. 43-44.

¹³ Van Arsadell, Paul M. *Opcit.* pp. 312-13.

business or with the same business in preceding years¹⁴.

Srivastava et al. observes that the viability of a business concern can be judged by measuring its liquidity, profitability and solvency position. The liquidity and solvency are the two vital organs of the financial viability of an enterprise and profitability is its life-blood¹⁵. Professor Archer argues that desired liquidity could be achieved by working out an optimum mix of current assets and current liabilities and proper financial planning¹⁶.

It is quite evidend by now that profitability depends upon the adequacy of earning. Howard and upton explain the nature of profitability in the following words:

"Profitability is not a condition that exists and can be measured for a certain period of time. It is a variable thing like the temperature of a human body. Determination of a periodic income by an accountant can be likened to the temperature reading or pulse taking by a nurse. The present health and stamina of a business concern are recorded histry and the accountant is interested only in the future profit including its adequacy and viability. The principal means of determining this position is by appraising past and present performance in the light of present and prospective economic condition¹⁷.

They further added that an adequate Return on Investment (ROI) is a reliable measure of the profitability of a business

¹⁴ Haward and Upton. Opcit. p. 147.

¹⁵ Srivastava et al. Opcit. p. 30.

¹⁶ Stephen H. Archer and Charles A. D'Ambrosio. Business Finance. NY; The Macmillan Company, (1966). pp. 177-78.

¹⁷ Haward and Upton. Opcit. pp. 157-58.

organisation¹⁸. Bernstein Favours application of Earning per Share (EPS) as an important measure of the earning power of an industrial organisation¹⁹. An increasing trend in EPS indicates that the investors are earning a good ROI and value of the firm is going up.

2. **Earning Before Interest and Taxes [EBIT]** is another important figure which can be of considerable help in evaluating the operating performance of an industrial organisation²⁰. This figure can be arrived at after deducting the Selling and Distribution Expenses from Gross Profit and it is also known as Operating Profit. Since this figure apply to companies and the rate of taxes are correlated with the size of income, the task of comparing the different groups of companies are considerably facilitated²¹. Here we find that 11 of the sample companies suffered from this type of deficiency which stands at 48 percent of the sample companies.

The EBIT figures of the sample companies are given at the end of this chapter.

3. **Earning After Interest and Taxes (EAIT)** is known as Net Income which can be calculated after deducting all interest and

¹⁸ Ibid. p. 158.

¹⁹ Leopold A. Bernstein. The Analysis of Financial Statement. Homewood, Illinois, Daw-Jones Irwin, (1978). pp.102-102.

²⁰ Hingorani et al. Opcit. p. 159.

²¹ Bion B. Howard and Miller Upton. Introduction to Business Finance. N.Y.; McGraw-Hill Book Company Inc., (1953). pp. 147-49.

taxes from a company's Operating Profit²². This figure is expected to be very low or negative in case of a sick company²³. The position of sample companies regarding EAIT is given at the end of the chapter.

4. **Retained Earning** : This represents the amount of current earning which is left over after meeting all expenses and financial charges from the yearly profit earned by a company²⁴. It also represents the balance of Profit and Loss Appropriation Account. The retained earning position of the sample companies are given at the end of the chapter.

5. **Working Capital** (Current Assets - Current Liabilities) is a vital indicator of a company's short-term liquidity and profitability²⁵. A deficient Working Capital is a common feature of a sick company which denotes that it has failed miserably in augmenting its earning potential and current liabilities are increasing unabatingly²⁶. It also indicate that the management is incapable of managing its current assets and current liabilities and thus maintain a desirable balance between them. The position of the sample companies in respect of working capital is given at

²² N.L. Hingorani and A.R. Ramanathan. Management Accounting. 4th rev. ed. New Delhi; S. Chand & Sons, (1986). pp. 157-58.

²³ Srivastava, S.S. et al. Management and Monitoring of Industrial Sickness. New Delhi: Concepts Pub. Co. (1980) p. 13.

²⁴ Michael H. Granof. Financial Accounting. Englewood Cliffs, N.J., Prentice-Hall Inc., (1977). pp. 38-39.

²⁵ K.V. Smith. Management of Working Capital. NY; West Publishing Company, (1974). pp. 350-60.

²⁶ V.E. Ramamoorthy, Working Capital Management. Madras; Institute of Financial Management & Research, (1976). pp. 435-45.

the end of the chapter.

6. **Net Worth** : It is the net amount which remains after deducting Long term Loan from the Total Capital Employed (Working Capital plus Fixed Assets) and it is another important index of a company's financial soundness²⁷. In case the amount is depleted by 50 percent or more, it is a definite indication that the unit is financially crippled or sick²⁸. The overall position of the sample companies in respect of Net Worth is given in the end of this chapter.

The foregoing discussion makes it quite apparent that all the sample companies suffered from poor earning power which ultimately compounded into serious financial difficulties and sickness followed in its wake.

5.3 Evaluation of Financial Accounting Practices

A number of authors and researchers have shown that a sick company attaches little importance to Accounting Information System and Financial Planning²⁹. A close look at the accounting and financial policies adopted by the sample companies showed that they paid no attention whatsoever towards the vital task of

²⁷ Hingorani, et al. *Op cit.* p. 158.

²⁸ Finance Bill. (1977). Government of India.

²⁹ John Argenti. Systematic Corporate Planning. UK; Nelson Publishing, (1982). pp. 180-90.

M.W.D. Glautier and B. Underdown. Accounting in a Changing Environment. NY; Pitman Publishing Corporation, (1974). pp. 35-45.

B.V. Carsberg et al. Small Company Financial Reporting. Englewood Cliffs. N.J.; Prentice-Hall Inc., (1985). pp. 220-40.

maintaining comprehensive accounting information, preparation and maintenance of upto date books of accounts and adaptation of sound financial Planning and Control. It was also observed that the management did not make any conscious attempt to monitor their operating results at regular interval, locate areas of difficulties and adopt timely remedial measures. They also failed to make use of vital accounting information as a decision making tool and indulged in large-scale window dressing.

In an effort to provide evidence regarding the poor status of financial and accounting practices followed by the sample companies under investigation, a number of standard accounting criteria was identified and the performance of the sample companies were evaluated in the light of the same. The following table shows the necessary information:

Table 5.2 : Status of the sample companies against selected accounting criteria

Benchmark of Standard Accounting Criteria	No. of Co's. Meeting Requirement	No. of Co's Not Meeting Requirement
<u>I. Accounting Principle Disclosure</u>		
a. Inventory Valuation Method	01 (4.17%)	23 (95.83%)
b. Asset Value Appreciation	23 (95.83%)	01 (4.17%)
c. Qualified Audit Report	23 (95.83%)	01 (4.17%)
<u>II. Preparation of Accounts</u>		
a. Accounting Staff	10 (41.66%)	14 (58.34%)

b. Misleading Accounting Practice	10 (41.66%)	14 (58.34%)
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III Financial Policy

a. Geared Capital	05 (20.83%)	19 (79.17%)
b. Dividend Policy	10 (41.66%)	14 (58.34%)
c. Depreciation Policy	07 (29.16%)	17 (70.84%)

A careful examination of the accounting criteria mentioned above and the performance of the sample companies clearly showed that a substantial percentage of sample companies could not satisfy them fully. Each of the criteria are discussed as follows:

For proper comprehension the entire gamnot of financial practices as followed by the sample companies will be discussed as follows :

1. Accounting Principle ^s/_h Disclosure :

While preparing annual accounts, every professional accountant is under a egal obligation to disclose all material fact regarding an industrial organisation and strictly follow the Generally Accepted Accounting Principles (GAAP). The phrase refers to these principles and practices which are more or less closely adhered to by the best accounting practices³⁰.

A subcommittee of the Accounting Principles Board worked on the project entitled "Basic Concepts and Broad Accounting

³⁰ John and Meyer. Opcit. pp. 22-23, 38-39.

Principles" in which they give some direction to defining GAAP.

Generally accepted accounting principles are priliminarily conventional in nature. They are the result of decisions; they represent the consensus at any time as to how the financial accounting process should operate and how financial statements should be prepared from the information made available through the financial accounting process.

Inasmuch as generally accepted accounting principles embody a consensus, they depend heavily on notions such as "general acceptance" and "substantial authoritative support", which have not been and probably will not be precisely defined. There is concurrence, however, that the notions of "general acceptance" and "substantial authoritative support" relate to the propriety of the practice, as viewed by informed intelligent and experienced accountants in the light of the purpose and limitations of the financial accounting process³¹.

More specifically, the APB has defined generally accepted accounting principles as "the conventions, rules, and procedures necessary to define accepted accounting practice at a particular time"³². Thus, GAAP is not limited to the principles and procedures in pronouncements issued by authoritative bodies, but also includes practices that have achieved general acceptance over time.

³¹ Marshall Armstrong, "Some Thoughts on Substantial Authoritative Support", Journal of Accountancy (April 1969). p. 50.

³² Accounting Principles Board Statement No. 4, Basic Concepts and Accounting Principles Underlying Financial Statements of Business Enterprises. New York: American Institute of Certified Public Accountants (1970). par. 138.

Some instance of such practices are unrealised profit should not be included in earning, the expenses incurred but unpaid should be included among the liabilities and that there should be full disclosure of all facts concerning financial position of an industrial unit and in general the application of accounting conventions and practices³³.

For the purpose of formulating accounting standards and principles to be followed by professional accountants, American Institute of Certified Public Accountants (AICPA) was established in 1934. This body carried on its assigned activities upto 1959 when another body named Accounting Principles Board (APB) took over its activity. The APB remained in existence from 1959 upto 1973 and issued 31 authoritative pronouncements. The financial Accounting Standard Board (FASB) floated in 1973 is the current standard setting board. It is an independent professional body comprising of several committees. The modern accounting principles and standards formulated by FASB is exercising a far-reaching influence on the professional accounting practices³⁴.

The management of an industrial unit is responsible for presenting the Financial Statement that reflects the economic events and transactions in conformity with CAAP. The auditor must evaluate the appropriateness of management's selection and the application of accounting principles employed. Thus the accounting probel resta efforts (management accountant) are directed to the discovery or the evaluation of accounting

³³ John N. Meyer. *Opcit.* pp. 22-23.

³⁴ Thomas R. Weirich and David J. Karmon, Accounting and Auditing Research: A Practical Guide, Cincinnati: South-Western Publishing Co. (1983). pp. 11-15.

principles that are considered generally accepted³⁵. This point will be discussed as follows:

a. Stock Valuation Method :

Meigs et al. observes that a standard and uniform stock valuation method is very essential for determination of true profit earned by a company³⁶. It may be further added here that the valuation of inventory and the measurement of exact Cost of Goods Sold is just like the two sides of a single coin³⁷. The American Institute of Certified Public Accountants (AICPA) has summarised the relationship between the valuation of inventory and measurement of profit in the following words :

"A major objective of the accounting for inventories is the proper determination of income through the process of matching appropriate cost against revenue. Here the expression "matching cost against revenue" means determining what fraction of the cost of Goods available for sale should be deducted from the income of the current period and what fraction should be carried forward as inventories to be matched against the income of the following period³⁸.

As per as Inventory Pricing is concern, : Section 178.106, referenced under inventory Pricing - Overhead, states in part, "Exclusion of all overheads from inventory costs does not constitute an accepted accounting procedure". The official pronouncement cited is Accounting Research Bulletin No. 43, Chapter 4, paragraph 5.

³⁶ Walter B. Meigs and Robert B. Meigs. Accounting: The Basis of Decision Making. 6th ed. New York; McGraw-Hill Book International Company, (1984). pp. 435-36.

³⁷ Ibid. p. 435.

³⁸ Ibid. p. 435.

Regarding Accounting Changes, Sections A06.107 states that "a change in the method of inventory pricing" is an example of a change in accounting principle. The following paragraph, A06.108, states, "A change in composition of the elements of cost included in inventory also is an accounting change ..." which should be reported as a change in principle. The original pronouncements cited are APB Opinion No. 20, paragraph 9 (A06.107) and FASB Internation No. 1, paragraph 9 (A06.108). These two sections suggest that a change in inventory pricing method is an "accounting change" which should be reported as a "change in accounting principles."

Sections A06.05-.106 indicate that a "change in accounting principle" involves a change from one generally accepted principle to another (APB Opinion No. 20, paragraphs 7 and 8). If a change is made from an erroneous method to one that is generally accepted, the change is not a change in principle. Section A06.104, which defines "accounting changes", states that the correction of an error is not an accounting change (APB Opinion No. 20, paragraph 6). Section A35.104 states, "A change from an accounting principle that is not generally accepted to one that is generally accepted is a correction of an error for purposes of applying this section." The source cited is APB Opinion No. 20, paragraph 13. Section A35.103 states that a correction of an error is to be accounted for and reported as a prior period adjustment (FASB Statement No. 16, paragraph 11). Specific disclosure requirements are set fourth in Sections A35.105-.107.

A sick company is most likely expected to violate this

standard practice and change the basis of stock valuation from time to time. This is resorted to mostly by a sick company. Here also only one of the sample companies voluntarily disclosed the stock valuation method followed by it. The remaining sample companies were conspicuous enough not to mention anything about the stock valuation method.

b. Assets Value Appreciation :

Clark et al. argues that appreciation of value of assets without any valid reason is a bad financial practice³⁹. This practice is usually followed by the management of a losing or sick company and its sale object is to conceal the real financial position of a company from outside creditors and customers⁴⁰. Here also one sample company appreciated the value of the assets by Tk. 1,20,00,000 in a desperate bid to write off the accumulated loss incurred for three consecutive years. Moreover, this was done in gross violation of established accounting principles which calls for creation of adequate reserve against the appreciated value of the assets. In this connection, the company tried to explain its position in the Prospectus as follows:

Wrong practice

³⁹ J.J. Clark, M.T. Clark and P.T. Algers. Financial Management: A Capital Market Approach. Boston; Hollbrook Press Incc., (1976). pp. 427-29.

⁴⁰ Ibid. P. 428.

"The company suffered an accumulated loss to the tune of Tk. 1,20,00,000 upto June, 1986 which was caused by trial wastage and marketing of new product. The company, however, adjusted the loss of Tk. 1,20,00,000 against a Capital surplus created out of revaluation of assets made in 1987. [Prospectus of the Company, p. 4].

This unusual attempt of the sample company was bitterly criticised by a number of professional organisations including ICAB. But the company went ahead with its plan and got membership of Dhaka Stock Exchange Limited.

c. Qualified Audit Report :

A Qualified Audit Report is one in which the auditors make some adverse observation about the accounts placed before than for the purpose of scrutiny. Whitred and Zimmer argues that a losing or sick company is expected to receive a large number of Qualified Audit Reports⁴¹. One of the sample company covered by the study actually received a Qualified Audit Report which is now out of operation since 1986. The auditors expressed their adverse opinion regarding non-maintenance of Fixed Assets Register by the company. The full text of the Auditor's Report is given below :

"In course of our audit, we observed that no fixed assets register was maintained by the company showing the details particulars of individual items of assets. The figure of fixed assets has been taken from the General Ledger. In our opinion, fixed assets register should be maintain showing full particulars of hte assets.

⁴¹ G.B. Whitred and K. Zimmer, "The Timeliness of financial Reporting and Financial Distress". The Accounting Review. (April, (1984). pp. 460-78.

Thus the foregoing discussion clearly shows that receipt of qualified audit report is indeed an important symptom of financial difficulty or sickness.

II. Preparation of Accounts

A regular and systematic practice of preparing the necessary accounts is a hallmark of good management. An overview of the performance of the sample units in this vital area has been discussed as follows:

a. Accounting Staff :

In general, a healthy industrial unit must employ sufficient number of qualified accounting staff. In case such qualified staff are not available, the management would not be able to have any access to upto date accounting and financial data which is a must for decision making. As a result, management inefficiency is likely to develop and remain largely undetected. Such lack of qualified accounting staff severely affects the financial health of an industrial organisation.

The qualified accounts in Bangladesh are being produced by ICAB and ICMAB. The total number of membership of these two professional institutions stand at 750 out of which 340 are employed in various industrial organisation of Bangladesh⁴². Thus the total number of qualified accounting staff is indeed very

⁴² M. Mozammel Hoque; "The Controllership Function;" The Bangladesh Accountant. Volume XII, Number 3, (July - September, (1989)). pp. 23-37.

small and limited in supply. The position of the sample companies are not encouraging enough in this respect where 14 of the sample companies did not employ any qualified accounting staff. The following table shows the position of companies in respect of employment of qualified accounting staff :

Table 5.3: Employment of Qualified Accounting Staff in the Sample Companies

Status of the Sample Companies	Qualified Accountants (%)	M. Com. (%)	B. Com (%)	Others (%)
1. Quoted Company	24	28	30	18
2. Unquoted Companies	Nil	58	10	32
Total	23	32	25	20

It is apparent from the table that only a quarter of the employed accountants are actually qualified ones. The M.Com and B. Com (Pass) degree-holders accounted for 32 and 25 percent respectively of the total number of accountants serving in the sample industrial units. It may be further added here that 20 percent of the accountants were not even commerce graduates and belonged to other discipline. Since these accountants are not well-acquainted with the modern tools of accounting including ratio analysis, they cannot advise the management regarding optimum use of the accounting data as a decision-making tool. Besides the discipline of accounting is very dynamic in nature and a qualified accountant must update his knowledge through training. The sample companies showed a poor performance in this respect also where 13 percent of the quoted companies and 1 percent of the unquoted companies provided training to its

accounting staff.

Cost accounting is a very useful technique of determining the cost of capital in a scientific manner⁴³. The sample companies paid very little emphasis on this aspect of accounting and did not employ any Cost Accountant. For instance, one of the sample company (a large textile mill) did not employ any cost accountant and attempted to explain its position in the Annual Accounts Report as follows :

"In the absence of any cost accounting staff, manufacturing expenses have been allocated on the basis of the utilyization of the time and/or best estimate." [Annual Accounts Report. 31.12.87].

The foregoing events clearly show that the sample companies could not utilize services of the qualified accounting staff owing to the lack of adquate earning power. Our finding fully confirms with the findings of Mr. Huq⁴⁴ who also came to the same conclusion regarding the use of qualified accounting staff in the various industrial undertakings of Bangladesh.

The author would like to narrate one small incident which vividly explain the notion of the industrial entrepreneurs regarding use of accounting staff. One day, a Civil Engineering graduate approached the author and wanted to have some reference to text books on accounting. When asked to elaborate, the student

⁴³ B. Banerjee. Cost Accounting. 7th Rev. ed. Calcutta; The World Press Private Ltd., (1986). pp. 1-7.

⁴⁴ M. Hoque. Opcit. pp. 35-36.

disclosed that one textile mill owner has agreed to appoint him as an accountant in his organisation. Moreover, he is very much eager to take the job since he could not find a job of a Civil Engineer for the last three years. The indications are quite clear here when a mill owner is trying to get the job of an accountant which is very technical in nature done by a Civil Engineer. It goes without saying such proposition is absurd, illogical and unfounded by any standard. FN

Almost every successful business organisation requires the services of a full-time qualified accounting staff. In order to prepare upto date books of accounts, an accountant must record all categories of business all business transactions in Journal with proper narration, transfer the same to respective Ledger Account and finally prepare the trial Balance after closing and balancing all books of accounts. The figure of the trial Balance is then used in drawing up Manufacturing Account, Profit and Loss Account and Balance Sheet. Thereafter the accountant has to interpret the accounting data contained in the above noted accounts which are collectively known as Financial Statement. The result of such interpretation would be very helpful in ascertaining the desirability or otherwise of the operating results of the company.

Thus we find that preparation of upto date and proper books of accounts is a very systematic and rigorous job. It is only possible for a full-time accounting staff to discharge such function. A sick company is always callous in maintaining full-time accounting staff. They traditionally regard the task of accounts preparation as a clerical one and fails to appreciate

its importance as a decision making tool. This also indicates that they do not have adequate financial capability of employing full-time accounting staff. The overall position of sample companies regarding employment of full-time accounting staff is shown in the following table.

Table 5.4: Use of Full-time Accounting Staff in the Sample Companies

Company Status	Full-time	Part-time	Hired	Total
1. Quoted Companies	12	03	NIL	15
2. Unquoted Companies	03	02	04	09
	<hr/>	<hr/>	<hr/>	<hr/>
	15	05	04	24

Here as far as the quoted companies are concerned, 12 of them managed to get the services of a full-time accounting staff and the remaining 3 companies managed to get the job done with the help of part-time accounting staff. The unquoted companies showed a poor performance in this respect and made a very scanty use of full-time accounting staff. They mostly used part-time and hired accounting staff to prepared the books of accounts which once again show that they do not have adequate earning power to support full-time accounting staff. It may also happen that this was done to keep the annual payroll expenses at a minimum and divert the balance for some other purpose.

b. Misleading Accounting Practice

A fast-growing and healthy concern would always adhere to standard accounting and financial practice. A sick company on the other hand, will always indulge in unethical and misleading accounting practice. In this respect Argenti observes that a sick company always attempts to hide poor financial position from creditors and shareholders through creative accounting or window-dressing. He further observes as follows :

"I have come to believe that the phenomenon is inversely associated with failure. We have found "creative accounting" in the twenty-second largest company in England and the sixth largest in America. I suggest that it is one of the most reliable of all symptoms"⁴⁵.

Interesting enough, some of the sample companies also exhibited the propensity of resorting to such misleading "window dressing" to cover-up poor operating result. The following are some instance of such practices :

One cold storage unit charged depreciation to Profit and Loss Appropriation Account which is quite unethical and not supported by GAAP [Annual Accounts Report 31.12.83. p. 6].

A textile company submitted its Annual Accounts Report in an abridged form and no additional note was provided [Annual Accounts Report 31.12.86. p. 5].

Another textile mill submitted its Annual Accounts Report for the year 1987 in a very abridged form and no detailed figure of Manufacturing Account, Profit and Loss Account and Balance Sheet was not provided. [Annual Accounts Report 31.12.88. p. 2].

⁴⁵ John Argenti. Opcit. p. 143.

Another cold storage unit showed old building ~~debries~~ as part of fixed assets in the Fixed Assets Schedule. The details of the fixed assets as showed by the company is given below:

Old building debries and other structure ...	Tk. 34,89,000
Rate of depreciation	10 percent

.rm65

It may be further added here that the depreciation as specified was not charged and deducted from the value of fixed assets [Annual Accounts Report 31.12.86. p. 4].

Another cold storage unit should Insurance claim of Tk. 12,00,000 for four consicutive years in the asset side of its Balance Sheet and did not explain the same with additional note [Annual Accounts Report 31.12.87. p. 2].

The above misleading accounting practices adopted by the sample companies proves that they are sick and the management is trying to suppress the poor financial position of the company.

III. Financial Policy

The formulation of pragmatic financial policy is an esential pre-requisite for the overall success of an industrial organisation. The following paragraphs highlights the achievement of the sample industrial units under investigation.

a. Geared Capital :

When a company's own equity capital and retained earning become inadequate as compared to its total financial requirement,

it is compelled to borrow from outside sources. In case such borrowing become large as compared to its own fund, it may be regarded as highly geared⁴⁶. In order to meet the additional financial burden arising out of high gearing, a company must earn sufficient revenue so as to yield a comfortable margin after paying cost of capital and other incidental charges⁴⁷.

Professor Stanford Warns against the evil consequences of lavish use of debt money and adds that such practice is highly risky⁴⁸. He advises the business enterprises to use more internally generated fund in a financial leverage sense and workout an optimum mix of internal and external fund⁴⁹.

Leverage enables the shareholders to reap the benefit of earning in excess of cost of capital which is often termed as "Trading on Equity". This is minimum rate of return and the actual earning must be more than this amount⁵⁰. However, it is not an unmixed blessing. It also exposes the shareholders to the risk of bearing the full burden of decline in earning which falls below the cost of capital⁵¹. As a result, the advantage of

⁴⁶ R.N. Anthony and J.S. Reece. Accounting Principles. 5th ed. Homewood, Ill; Richard D. Irwin Inc., (1987). p. 197.

⁴⁷ J.C. Van Horne. Financial Management and Policy. 5th ed. London; Prentice-Hall International Inc., (1980). pp. 779-85.

⁴⁸ M.J. Stanford. New Enterprise Management. Reston, Virginia; Reston Publishing Company, (1984). pp. 214-15.

⁴⁹ *bid.* p. 216.

⁵⁰ K.C. De. Techniques in Management Accounting. 4th ed. Calcutta; Indira Publication, (1988). pp. 289-96.

⁵¹ M.G. Wright. Financial Management. 2nd ed. New Delhi; Tata McGraw-Hill Publishing Company Ltd., (1981). pp. 153-56.

Financial Leverage operates to the detriment of the shareholders⁵².

Argenti found that a losing company uses highly geared capital, i.e. uses more credit fund than its own equity⁵³. This method of financing is risky when a company fails to cover the fixed interest burden due to economic turndown. He further adds that high gearing and economic turndown are the classic nutcrackers of failure⁵⁴.

The following table shows the extent of use of geared capital by the sample companies:

Table 5.5 : Use of Geared Capital by the Sample Companies

Contribution of Shareholder's Equity to Capital in %	No. of Companies	% of Total Companies
10-20	10	42.5
20-30	07	29.5
30-40	03	12.5
40-50	01	4.0
50-60	02	8.5
60-70	01	4.0
Total	24	100.00

⁵² J.J. Hampton. Financial Decision Making. 3rd ed. New Delhi; Prentice Hall of India Private Ltd., (1986). pp. 194-203.

J.C. Van Horne. Fundamentals of Financial Management. 5th ed. New Delhi; Prentice Hall of India Pvt. Ltd., (1985). pp 357-69

⁵³ J. Argenti. Corporate Collapse: Causes and Symptoms. London; McGraw-Hill Book Company Ltd., (1976). pp. 136-37.

⁵⁴ Ibid. p. 138.

Here it is quite evident that the sample companies made a lavish use of geared capital. They have deliberately chosen this harmful means of financing business solely with the objective of covering up their poor equity base and expected that it would yield a higher income arising out of "Trading on Equity". But in the long run, they failed to attain the objective of higher income and were pushed into serious financial difficulties.

b. Dividend Policy :

The term "dividend policy" involves the decision to distribute certain portion of current earning or retain the same for reinvestment in the firm. The payment of dividend results in the reduction of cash and therefore the total assets. In order to maintain the asset level and at the same time create scope for financing investment opportunities, the firm must obtain fund through issue of additional capital or obtain loan. If the firm fails to procure external fund, then its growth would be affected.

Khan and Jain adds that during such time, payment of dividend imply outflow of cash and lower future growth⁵⁵. Brigham further stipulate^s that the dividend policy affects both the shareholders wealth and the long term growth prospect of the firm⁵⁶. The aim of an optimum dividend policy should be to strike a balance between current dividend and future growth potential

⁵⁵ M.Y. Khan and P.K. Jain, Financial Management, New Delhi: Tata McGraw-Hill Company, Ltd. (1986). pp. 587-601.

⁵⁶ Eugene F. Brigham, Reading in Managerial Finance, New York: Holt, Rinehart and Winston (1971). p. 675.

which maximizes the value of the firms share.

The payment of dividend can therefore be expected to affect the price of a share, a low D/P ratio (Dividend per share/Earning pay share) may cause a decline in share price while a higher ratio enhance the price of share. Another objective of dividend policy ^{is} into make sufficient provision for financing growth. For such purpose, a firm must forecast the future need for fund by taking into consideration the external availability of fund and certain market constraints, determine both the amount of retained earning realised and the amount of retained earning available after the minimum dividend has been paid. Thus the dividend policy should not be viewed as a residual but rather as a required outlay after which any remaining fund can be reinvested in the firms⁵⁷. It may be added here that the shareholders and investors generally favour a more or less stable dividend policy. 48

In general, the shareholders hold shares to get a good return on investment in the form of dividend. At the same time, there may be shareholders who attach less importance to dividend and wants the firm to achieve growth through retention of the dividend earning. They expect to reap the benefit of capital gain through sale of growth stock. It may also happen that some investors may prefer to have a dependable regular source of income and would not like to gamble in future capital gain. Such investors are more interested in a constant record and payment ratio. The D/P ratio is a good measure of the dividend policy of a firm. Shareholders who prefer to enjoy capital gain will like

⁵⁷ Lawrence J. Gitman, Principles of Managerial Finance, New York: Harper and Row (1976). p. 580.

the ratio to be small whereas shareholders who likes to enjoy dividend income prefers it to be large enough. It has also been found that industries with ample opportunity for growth at high rate of return of assets tend to have a low payment ratio while the reverse is true for industries with limited growth opportunities. Myer observes that an investment analyst would be very interested in analyzing the variation in retained earning due to payment of dividend⁵⁸.

For this purpose, the analyst keeps his eyes on two points namely adequacy of dividend and maintenance of a constant rate and a conservative policy in retaining a sufficient portion of earning in the enterprise. He further adds that achieving a fine balance between these two factors are the earmark of good investment⁵⁹.

Failure to declare handsome rate of dividend on a regular basis is a major financial weakness and is widely regarded as a manifestation of sickness⁶⁰. The following table shows that as many as 14 companies could not declare any dividend in the face of declining earning and profitability. The position of the remaining companies which somehow managed to declare dividend is shown below:

⁵⁸ John and Myer. *Opcit.* pp. 216-17.

⁵⁹ *Ibid.* p. 217.

⁶⁰ George C. Philippatos. Principles of Financial Management. San Francisco: Holden-Day Inc., (1974). pp. 262-63.

Table 5.6 : Position of the Sample Companies in Respect of Declaration of Dividend

Rate of Dividend (%)	No. of Companies	% of Total Companies
10-15	02	20
16-20	03	30
21-25	04	40
26-30	01	10

It is quite clear here that a sizable number of companies could not pay a high rate of dividend. Again some of the companies which managed to pay some dividend but they fell below the rate of interest offered by the Bureau of National Savings, Savings Scheme offered by Bangladesh Post Office, Interest on Savings Bank Account of the Nationalised Commercial Banks, and Deposit Pension Scheme. It was also found that majority of sample companies did not formulate a balanced dividend policy and declared dividend lavishly which did not match with level of earning. A representative instance of such unbalanced dividend policy followed by two sample companies are given below :

Table 5.7 : Dividend Declaration Position of Two Sample Companies

1985	Tk.	1985	Tk.
Profit	30,26,000	Profit	4,69,00,000
Dividend declared	27,60,000	Dividend declared	32,00,000
Balance	<u>4,66,000</u>	Balance	<u>4,37,00,000</u>

(Continued)

1986		1986	
Profit	22,00,000	profit	2,33,00,000
Dividend declared	18,00,000	Dividend declared	32,00,000
Balance	<u>4,00,000</u>	Balance	<u>2,01,00,000</u>
	=====		=====
1987		1987	
Profit	30,13,000	Profit	2,65,00,000
Dividend declared	26,00,000	Dividend declared	46,00,000
Balance	<u>4,13,000</u>	Balance	<u>2,19,00,000</u>
	=====		=====
		1988	
		Profit	2,60,00,000
		Dividend declared	40,00,000
		Balance	<u>2,20,00,000</u>
			=====

It is quite evident from the table that none of the above noted sample companies followed a balanced dividend policy. This proves that they have no comprehensive financial planning and control mechanism.

c. Depreciation Policy :

Depreciation may be defined as permanent and continuing diminution in the quality of an assets due to normal wear and tear, influence of external natural forces or obsolescence. According to Philippatos, depreciation (usually a non-cash expense) is a very important financial aspect having a far-reaching consequence on the life cycle of a business or ganisation⁶¹. Depreciation may be classified into three types

which is given below :

- A. Physical Depreciation
- B. Accounting Depreciation
- C. Economic Depreciation.

A. Physical Depreciation : This refers to normal wear and tear which is expected to take place in an asset as a result of constant use during its economic life. However, it has only its conceptual meaning and cannot be applied in practical field where assets are usually abandoned long before their complete physical obsolescence due to market and technological obsolescence.

B. Accounting Depreciation : This refers to the reported charges as per the book-keeping practice of the business enterprise. Accounting Depreciation may coincide with physical depreciation but the rate of accounting depreciation is much higher than the actual physical deterioration. The discrepancy in the rate depends on the type of assets and the firm's policy. However, it may be noted here that the flow of accounting depreciation is largely determined by legal requirement and the physical deterioration of the assets. Since depreciation deductions are added to the pool of fund as a source, fast-growing companies have gone to the legal limits and used depreciation along with retained earning as a steady source of internally generated fund.

C. Economic Depreciation : This refers to the rate of decrease in the revenue generated from the use of specific assets. Since

revenues are determined by the market economic depreciation refers to the gradual obsolescence of an asset as the demand for the commodity produced by it diminishes due to change in market taste and preferences. Rates of Economic depreciation is determined by the market may be equal to or greater than the physical and accounting depreciation. It is the liquidation (market) value of an assets that is important than its book value. Typically, in a developed economy, economic depreciation is higher than the physical or accounting type since shifting market preferences and technological progress continue to reduce the liquidation value of an assets. Furthermore when the rate of economic and accounting depreciation are equalised by constant adjustments, the expost rate of return on the assets will equal the discount factor (cost of borrowing).

It may be further added here that when the rate of economic depreciation is higher than the rate of accounting depreciation, then the firm will stagnate ceteris paribus; on the other hand, if the two rates are equal, the firm will be stationary. If the rate of economic depreciation is less than the reported accounting depreciation, the firm will grow over time from the plowback of reinvested depreciation fund. These are very important relationships which determines the survival and growth of a firm throughout its entire life cycle.

In industries in which the rates of technological growth and asset obsolescence are higher than the permitted rates of accounting depreciation, the existing government regulations serve as a deterant to growth. On the other hand in industries in which technological growth and asset obsolescence are lower than

the legal rates, the existing regulations represent unwarranted loan subsidy to encourage growth.

Khan and Jain argue that calculation of depreciation has a very significant bearing on the Earning After Tax⁶². The reason is that a firm can legitimately deduct the depreciation charge from its gross income to arrive at EBIT. It may be noted that different method of calculating depreciation affects tax liability and hence the cash flow differently. Therefore, the net effect of computing depreciation on a firm's net income must be analysed carefully before arriving at any capital budgeting decision.

In general, the higher the rate of depreciation, the lower will be the amount of tax liability or greater will be the amount of cash flow. In other words, increased rate of depreciation results in increased cash flow and greater benefit to the firm. In the opinion of Garrison⁶³, deduction of depreciation shields revenues from taxes, it is often termed as Depreciation Tax Shield. The following example will illustrate the point further :

Table 5.8 : Effect of Depreciation Deduction

	Firm X	Firm Y
Sales	Tk. 50,000	Tk. 50,000
Expenses		
Cash Operating Expenses	Tk. 40,000	Tk. 40,000
Depreciation Expense	2,500	*****
Total	Tk. 42,500	Tk. 40,000

⁶² Khan and Jain. *Op cit.* pp. 209-21.

⁶³ Ray H. Garrison. *Op cit.* pp. 642-44.

(Continued)

Net Income Before Tax	Tk. 7,500	Tk. 10,000
Less Income Tax 40%	Tk. 3,000	Tk. 4,000
Profit After Tax	Tk. 4,500	Tk. 6,000

Cash Flow Comparison

Cash Flow from operation

Net Income as Before	Tk. 4,500	Tk. 6,000
Add non-cash deduction of depreciation	Tk. 2,500	*****
	Tk. 7,000	Tk. 6,000

Greater amount of cash available

to Firm X

Tk. 1,000

The following table shows the necessary tax adjustments made for Capital Budgeting decisions

Table 5.9 : Tax adjustments required in a Capital Budgeting Decisions

Item	Accounting Treatment
1. Cash Expense	Multiply by (1 - Tax Rate) to get the after tax cost
2. Cash Receipt	Multiply by (1 + Tax Rate) to get the after Tax cash Flow
3. Depreciation Deduction	Multiply by the tax rate to get the tax saving from the depreciation tax shield

Making adequate provision for depreciation is an important index of sound Financial and Accounting Policy⁶⁴.

⁶⁴ Philippatos. Op cit. pp. 135-40

A company experiencing financial difficulty are expected to ignore this vital point and adopt freelance approach⁶⁵. Here as many as 17 of the sample companies did not follow a definate deprecation policy and were found to be very irrigular in kaking adequate provision for depreciation. Again some of the companies calculated yearly deoreciation but did not charge the same to Profit and Loss Account. Some example of such irregular practice regarding depreciation is given below :

Like previous years, no depreciation has been provided during the year under review in respect of company's fixed assets. Depreciation for the year 1982-83 and 1983-84, if provided, would have amounted to Tk. 51,44,566.12 including Tk. 24,94,118.93 for the year under review [Annual Accounts Report 31.12.84. p. 4]

This sample unit (a printing and packaging industry) continuously reported the same position about depreciation charge for another four years that is upto 1988. Upon inquiry. It was found that the company purchased the above noted printing machine at a cost of Taka 38,00,000;- with the collaboration of BSB. After delivery, it turned out to be difected and hence could not be commissioned to use. The management admitted blockage of such large amount of money in a valuable asset like machinery has posed a big financial headache. For the time being, the amount have been placed under suspense account. This also implies that adequate care was not taken at the time of purchasing such vital piece of equipment.

65 Roger H. Hermanson et al. Financial Accounting Piono, Texas Business Publication Inc., (1981). pp. 311-12.

Such instance of withholding depreciation charge for year after year is a conclusive evidence of the fact that the sample company is financially crippled or sick.

5.4 Results of Ratio Analysis :

There are various approaches of finding out the extent of industrial sickness such as field investigation, opinion survey, interview etc. But researcher preferred the Balance Sheet Approach in view of its improved predictive value and large-scale use in previous research works.

The weather forecaster studies the meteorological condition and issues advance warnings at appropriate time to the public to take shelter at safe places. Similar warnings were issued by the Meteorological Department of GOB to the concerned agencies such as Chittagong Port and Defense Installations before the catastrophic tidal bore of April 21, 1991. But all these agencies failed to pay any heed to such warnings and suffered terrible damage due to their neglect and default.

In the same way, the industrial enterprises in Bangladesh paid no attention towards systematic preparation of books of accounts and calculation/analysis of financial ratios. Had they been quite alert and meticulous in undertaking these vital tasks, they could have easily keep their industrial unit immune of Industrial Sickness. So it is quite clear here that the enterprises were kapt in complete darkness about the imminent onslaught of Industrial Sickness since there was no qualified accounting staff to provide the necessary feedback through timely

financial ratio analysis. In order to substantiate the previous observations, a total of 24 accounting ratios were calculated for a period of five years for all the sample companies using the Univariate Approach of ratio analysis, The results are given below :

Group A Companies (Profitable)

Table 5.10 : Turnover Ratios

Company Code No.	Mean Value of Ratios						
	1 Times	2 Times	3 Times	4 Days	5 Days	6 Days	7 Times
A ₁	2.36	5.83	0.96	25.45	25.45	152.63	1.62
A ₂	6.37	(30.46)	0.37	6.80	6.80	(203.34)	16.34
A ₃	2.90	4.77	1.50	372.68	346.52	(911.56)	2.29
A ₄	5.12	5.88	1.97	582.43	582.43	(625.18)	2.98
A ₅	0.93	1.87	1.73	43.22	43.22	2761.36	0.69
A ₆	3.34	(5.23)	1.02	96.43	125.46	(1627.52)	2.13
A ₇	1.22	1.53	0.76	91.04	143.21	(629.93)	0.95
A ₈	3.79	13.42	8.59	48.89	48.89	2463.50	2.57
A ₉	10.24	20.96	17.25	953.44	953.44	(197.14)	10.02
A ₁₀	38.91	22.29	1.07	13.72	13.72	95.72	NIL

Table 5.11 : Profitability Ratio

Company Code No.	Mean Value of Ratios					
	8 %	9 %	10 %	11 Times	12 %	13 %
A ¹	19.07	23.54	23.59	19.82	19.82	12.52
A ²	(77.43)	18.48	(6.24)	0.85	(10.22)	(15.95)
A ³	26.90	9.52	238.08	9.29	9.29	7.78
A ⁴	26.20	20.76	145.12	5.87	29.00	17.68
A ⁵	23.32	66.18	1.88	12.72	12.57	8.15
A ⁶	36.56	22.07	26.86	24.11	24.09	14.52
A ⁷	24.17	(2.66)	(6.76)	0.72	10.73	5.66
A ⁸	9.32	9.12	128.20	6.98	15.33	16.86
A ⁹	1.10	(2.36)	80.52	0.23	3.85	6.86
A ¹⁰	6.21	14.13	85.18	1.57	0.41	16.13

Table 5.12 : Liquidity Ratios

Company Code No.	Mean Value of Ratios	
	14 Ratio	15 Ratio
A ¹	1.17:1	3.83:1
A ²	1.65:1	1.38:1
A ³	1.34:1	1.28:1
A ⁴	1.55:1	0.48:1
A ⁵	0.77:1	2.36:1
A ⁶	0.68:1	0.56:1
A ⁷	1.87:1	(0.90):1
A ⁸	6.51:1	2.12:1
A ⁹	1.17:1	3.38:1
A ¹⁰	0.46:1	0.03:1

Table 5.13 : Capital Gearing Ratio

Company Code No.	Mean VALUE of Ratio					
	16 Ratio	17 Ratio	18 %	19 Ratio	20 Ratio	21 Ratio
A ¹	1.78	0.1	60.46	0.28	(0.91)	0.36
A ²	0.13	0.14	758.00	1.01	0.21	3.64
A ³	0.13	0.1	554.33	3.83	3.76	0.36
A ⁴	0.37	0.11	288.7	0.36	6.02	0.66
A ⁵	35.14	0.19	164.7	0.042	2.46	1.93
A ⁶	0.96	0.16	208.55	0.34	1.90	0.77
A ⁷	0.54	0.19	376.00	1.10	1.9	1.09
A ⁸	0.42	0.11	204.72	1.02	7.18	1.11
A ⁹	1.78	0.1	60.46	0.28	0.91	0.36
A ¹⁰	0.22	0.36	456.41	1.73	1.08	2.25

Table 5.14 : Financial Leverage Ratio

Company Code No.	Mean Value of Ratios		
	22 Ratio	23 Taka	24 Times
A ¹	0.72	32.78	4.68
A ²	0.63	(154.25)	NIL
A ³	0.40	106.52	14.90
A ⁴	2.51	22.70	5.29
A ⁵	2.19	0.039	(2.10)
A ⁶	0.58	10.13	18.95
A ⁷	0.1	(2.29)	6.51
A ⁸	1.27	10.81	NIL
A ⁹	2.71	32.78	4.68
A ¹⁰	2.84	0.1	NIL

Even though the BSB Audit Report listed the above companies under profitable group and they were also quoted ones, the results of ratio analysis shows that they were sick. This is apparent from the declining low or negative result of the ratios calculated.

Group - B

Table 5.15 : Turnover Ratios

Company Code No.	Mean Value of Ratios						
	1 Times	2 Times	3 Times	4 Days	5 Days	6 Days	7 Times
B ¹	4.79	4.86	1.12	48.78	48.78	1158.50	5.94
B ²	0.77	(0.80)	0.53	21.03	20.03	567.18	0.74
B ³	0.77	(0.80)	0.53	21.03	20.03	(2058.78)	0.82
B ⁴	0.87	182.23	42.50	119.78	119.78	427.00	0.62
B ⁵	2.06	19.21	2.01	42.13	42.13	(1838.20)	1.26
B ⁶	2.90	4.77	1.50	372.68	346.52	(916.56)	2.29
B ⁷	3.79	13.42	8.59	48.89	48.89	1463.50	2.57
B ⁸	32.25	22.49	7.66	34.46	24.46	(229.18)	32.07
B ⁹	2.95	5.15	1.86	193.24	193.24	(18.05)	2.32
B ¹⁰	1.84	3.29	6.52	32.79	32.79	(377.38)	2.52
B ¹¹	*NIL	4.37	0.57	60.18	60.18	(346.96)	15.99
B ¹²	*NIL	3.58	0.75	20.38	20.38	(153.45)	NIL*
B ¹³	*NIL	(3.96)	0.28	2.88	3.11	(301.76)	NIL*
B ¹⁴	*NIL	*NIL	*NIL	0.04	0.14	0.04	NIL*

A Figure not Available

Table 5.16 : Profitability Ratios

Company Code No.	Mean Value of Ratios					
	8 %	9 %	10 %	11 Times	12 %	13 %
B ¹	8.17	12.44	10.89	10.76	10.76	6.09
B ²	13.86	5.14	6.83	9.95	0.95	0.80
B ³	3.90	1.88	(7.58)	1.22	1.22	5.19
B ⁴	30.65	23.75	59.82	2.93	12.99	10.91
B ⁵	5.58	1.89	82.70	1.42	6.47	(12.17)
B ⁶	13.82	7.84	35.69	14.46	56.33	17.01
B ⁷	13.61	5.72	30.17	2.61	12.24	7.02
B ⁸	0.93	(5.50)	17.57	(1.55)	(14.01)	17.00
B ⁹	12.34	7.24	34.35	1.27	6.62	2.30
B ¹⁰	7.59	0.59	21.87	3.55	NIL	3.53
B ¹¹	22.52	164.81	(9.81)	1.07	36.40	13.88
B ¹²	41.18	75.62	(56.33)	1.30	1.26	18.98
B ¹³	(7.57)	(25.61)	(1.74)	2.52	22.49	(13.55)
B ¹⁴	NIL	NIL	NIL	1.00	NIL	NIL

NIL = figure not available.

Table 5.17 : Liquidity Ratio

Company Code No.	Mean Value of Ratio	
	14 Ratio	15 Ratio
B ¹	1.38:1	0.10:1
B ²	1.13:1	1.95:1
B ³	0.83:1	0.25:1
B ⁴	1.08:1	0.83:1
B ⁵	1.85:1	0.41:1
B ⁶	2.07:1	3.63:1
B ⁷	1.16:1	0.53:1
B ⁸	2.22:1	3.07:1
9	1.64:1	0.66:1
B ¹⁰	3.38:1	0.42:1
B ¹¹	17.71:1	14.71:1
B ¹²	11.04:1	5.07:1
B ¹³	0.0002:1	0.012:1
B ¹⁴	0.16:1	0.16:1

Table 5.18 : Capital Gearing Ratio

Company Code No.	Mean Value of Ratios					
	16 Ratio	17 Ratio	18 %	19 Ratio	20 Ratio	21 Ratio
B ¹	0.21	0.14	163.03	0.47	0.03	1.42
B ²	6.28	0.29	155.68	0.46	2.05	0.75
B ³	0.86	0.15	3.50	0.30	0.62	0.68
B ⁴	0.65	0.15	8.91	6.88	1.56	0.83
B ⁵	0.25	0.08	392.46	0.37	1.64	1.06
B ⁶	24.18	0.42	5.78	0.025	38.23	0.46
B ⁷	14.69	0.18	9.31	0.014	1.98	0.87
B ⁸	1.58	0.38	118.78	0.19	(0.98)	0.44
B ⁹	0.75	0.24	130.31	0.31	2.69	0.75
B ¹⁰	0.35	0.18	19.05	2.58	NIL	3.09
B ¹¹	0.11	0.15	881.56	1.30	1.44	1.61
B ¹²	0.13	0.12	384.85	1.33	(0.41)	2.27
B ¹³	0.11	0.12	844.76	0.82	0.86	1.25
B ¹⁴	0.20	0.43	482.50	2.08	NIL	2.86

Table 5.19 : Financial Leverage Ratio

Company Code No.	Mean Value of Ratios		
	22 Ratio	23 Taka	24 Times
B ¹	0.01	0.02	NIL*
B ²	0.52	0.0005	NIL*
B ³	0.15	(6.61)	(3.36)
B ⁴	1.00	0.078	2.90
B ⁵	3.09	20.29	4.00
B ⁶	17.4	14.96	NIL*
B ⁷	8.71	12.81	NIL*
B ⁸	(0.13)	(10.06)	2.34
B ⁹	(1.18)	0.26	(4.10)
B ¹⁰	1.00	29.70	NIL*
B ¹¹	3.53	0.15	NIL*
B ¹²	(2.26)	(144.44)	NIL*
B ¹³	(1.75)	0.07	NIL*
B ¹⁴	NIL*	NIL*	NIL*

* The figures are not available.

The group B companies also exhibits all the symptoms of sickness since all the major accounting ratios are either low, declining or negative. Much of these sickness could have been tackled effectively if the accounting ratios were calculated regularly and monitored under a comprehensive evaluation programme.

Multivariate Approach (Accounting Model)

With a view to provide further evidence to the fact that the selected industrial units are indeed sick, a total of two important accounting models namely Altman's Z-score and Taffler's Z-score under Multivariate approach of ratio analysis were calculated. The results of such accounting models calculation are given below :

Table 5.20 : Results of Altman and Taffler Z-Score

Company Code No.	Altman's Z-score	Standard Score	Taffler's Z-score	Standard Score
<u>Group - A</u>				
A ¹	1.64	2.675	(313.92)	(1.95)
A ²	0.354	2.675	(46.92)	(1.95)
A ³	1.09	2.675	(52.73)	(1.95)
A ⁴	0.30	2.675	(323.33)	(1.95)
A ⁵	1.73	2.675	(153.22)	(1.95)
A ⁶	0.31	2.675	(291.46)	(1.95)
A ⁷	0.42	2.675	(123.59)	(1.95)
A ⁸	0.922	2.675	(185.86)	(1.95)
A ⁹	2.36	2.675	(135.95)	(1.95)
A ¹⁰	1.04	2.675	(14.89)	(1.95)

Group - B

B ¹	1.78	2.675	(48.19)	(1.95)
B ²	1.948	2.675	(87.83)	(1.95)
B ³	0.67	2.675	(411.32)	(1.95)
B ⁴	0.8133	2.675	(207.38)	(1.95)
B ⁵	0.093	2.675	(83.11)	(1.95)
B ⁶	1.85	2.675	(13.14)	(1.95)
B ⁷	1.42	2.675	(83.69)	(1.95)
B ⁸	0.404	2.675	(60.86)	(1.95)
B ⁹	0.950	2.675	(87.83)	(1.95)
B ¹⁰	0.263	2.675	(109.55)	(1.95)
B ¹¹	(1.15)	2.675	1.26	(1.95)
B ¹²	0.38	2.675	(226.20)	(1.95)
B ¹³	0.8	2.675	(329.48)	(1.95)
B ¹⁴	1.346	2.675	(262.17)	(1.95)

Note : The figures in parenthesis indicates negative figure.

The results of the above noted accounting models also prove beyond any reasonable doubt that all the sample companies are sick since all of them have come up with a score which fell below the prescribed cut-off point. Once again, it may be added here that sickness could have been diagnosed and tackled effectively if the management used accounting ratio (Univariate and Multivariate) as an analytical tool.

5.5 Analysis of Non-financial Information :

For the purpose of removing the limitations of accounting data generated by Bangladeshi companies, it has been deemed necessary to incorporate some non-financial parameters. The usefulness of such parameters for the purpose of diagnosing sickness has been highlighted by the research work conducted by Keasy and Watson. We have attempted to include true more non-financial parameters to the original list as suggested by Keasy and Watson. [For details see Appendix]. Now let us have a look at the non-financial formation relating to the sample companies. They are as follows :

Table 5.21 : Age of the company

Age of the Company in years	No. of Companies	% of the Total
7-10	6	25.00
11-15	9	37.50
16-20	3	12.50
21-25	6	25.00
	24	100.00
	=====	=====

5.23 : No. of Current Directors

No. of Directors	No. of Companies	% of the Total
2-4	07	29.16
5-8	17	70.84

5.24 : Entry and Exit of Directors

Mobility of Directors	No. of Companies Answering Yes	No. of Companies Answering No	Total
3. Entry of new director	10 (41.66)	14 (58.34)	24
4. Exit of directors	11 (45.83)	13 (54.17)	24

(Figures in the parentheses indicate percentage)

5.25 : No. of Non-director Shareholders

Number	No. of Companies	% of the Total
100-500	08	33.33
501-1000	02	8.34
1001-1500	02	8.34
1501-2000	02	8.34
2001-2500	04	16.66
2501-3000	01	4.16
3001-3500	01	4.17
3501-4000	01	4.17
4001-4500	01	4.16
4501-5000	02	8.33
	<u>24</u>	<u>100.00</u>
	=====	=====

Non-financial Variables	No. of Companies Answering Yes	No. of Companies Answering No
6. Introduction of new Share Capital	02 (8.33)	22 (91.67)
7. Change of Auditors	04 (16.66)	20 (83.34)
8. Has there been any Qualified Audit Report over the last three years?	01 (4.16)	23 (95.84)
9. Has the Company Received any Qualified Audit Report in the current year?	00 (0.0)	24 (100)
10. Has the Company Received any "going concern" Qualification?	20 (83.34)	04 (16.66)
11. Has the Company any Secured Loan on the Company's Assets?	22 (95.84)	02 (4.16)
12. Is there a Secured Loan on the Company's Assets held by a Banks?	21 (87.5)	03 (12.5)

Table 5.26 : Non-financial Information

Non-financial Variables	Duration of Lag (months)	No. of Companies
13. Average Audit Lag in months over last three years	1-4	03 (12.50)
	5-8	19 (79.17)
	9-12	02 (8.33)
14. Average Submission Lag in months over the last three years	1-4	11 (45.83)
	5-8	12 (50.00)
	9-12	01 (4.17)
15. Average Lag in month between Auditor's Signature and Submission	1-4	17 (70.83)
	5-8	07 (29.17)
	9-12	00 (00.00)
16. Final year Audit Lag in months	1-4	18 (75.00)
	5-8	05 (20.83)
	9-12	01 (4.17)
17. Final year Submission Lag in months	1-4	21 (87.50)
	5-8	01 (4.17)
	9-12	01 (8.33)
18. Final year Lag in months between Auditors Signature and Submission	1-4	23 (95.83)
	5-8	01 (4.17)
	9-12	00 (00.00)

After analysing the last two non-financial parameters, it was found that 80% of the sample companies spent very little time in looking after there own business. The reason was that all of them had a number of other industrial undertakings of their own in addition to the sample units.

Thus a careful scrutiny of the non-financial information reveals that the sample companies were young in age and dominated by a one-man rule. They also exhibited all the signs of bad management which is responsible for sickness. They were also using a heavy amount of outside debt and majourity of them failed to improve their equity base through infusion of new share capital.

They have also neglected the accounting functions which is apparent from the heavy incidence of Audit Lag and Submission Lag. The delayed preparation and submission of Annual Accounts Report also indicated that all the aforesaid sample companies have miserably failed to utilies the accounting information to monitor their overall operating results. Last but not the least they have also deliverately ignored the vital fact that "prevention is better than cure".

5.6 Expert Opinion Survey

Ten leading academicians and researchers of Bangladesh were consulted with the help of an open end questionnaire to ascertain their views regarding slanted growth and ailing condition of the industrial units in general. Some of them served in the

policymaking agency of the Government, BFI, banks and other agencies. They also served in the committees and commission of the Government constituted for investigating the existing problems of industrial management. They were connected with the Planning Commission of the Government and took active part in the policy formulation. The following is a summary of their views regarding causes of sickness which emerged from the discussion with them.

1. One noted economist observed that management inefficiency is a potential cause of industrial sickness in Bangladesh. He further added that trained and efficient management personnel should be imported on a large scale instead of food and contraceptive. Therefore some steps are urgently required regarding Manpower Development which can alone ensure adequate supply of trained management personnel.

2. Some of them also opined that indiscriminate project sanctioning and liberal advancement of project loan without due consideration of its economic viability is also responsible for industrial sickness. The concerned officials of banks and Government agency deliberately such reckless steps because they did not have a stake of their own. There was also a complete absence of administrative mechanism to hold this accountable for their acts and omission.

3. Another potential cause of industrial sickness is "interlocking of power" of the executives of banks and government agency enabled them to hold several important posts at the same time. This tended to encourage them to adopt arbitrary actions

and decisions which fails to achieve any tangible success in the long run. Moreover, abrupt and frequent transfer of key government officials from one post to another also complicates the situation and hampers proper implementation of policy prescription.

4. One researcher observed that absence of a well-organised Stock Exchange is another leading cause of industrial sickness in Bangladesh.

5. Another researcher expressed the view that dearth of sufficient number of entrepreneurs may be cited as another vital cause of ailing condition of the industrial sector. They are mostly of 'first generation' and lacks knowledge, experience, foresight and business acumen and commitment to specified goal. They also seemed to behave in an irrational way by rushing in large number in a particular industrial venture pioneered by an innovative entrepreneur which renders it economically unviable within a short time.

6. In the opinion of another economist, absence of pragmatic government policy and its proper implementation also leads to outbreak of industrial sickness. These policies often lacked three C's namely commitment, continuity and credibility which fails to create confidence among local and foreign prospective entrepreneurs/investors. It is apprehended that unless some remedial measures are taken to improve the situation, the incidence of sickness among industrial units are expected to be on the increase.

5.7 Chapter Summary

This chapter forms the chore of the study in which the analysis and interfratation of collected accounting data and other information were undertaken. The analysis was carried out in several stages namely analysis of financial statement data, analysis of accounting practices, calculation and analysis of financial ratios and analysis of non-financial information. Tfhe learned opinion of the researchers and acadmicians were also examined to find out the underlying causes of sickness among industrial units in Bangladesh.

In view of prevailing management incompetence among the management of sample enterprises, the regular preparation and analysis of vital accounting data remained very much neglected. This kept them unaware of the coming shape of things and thus they became and easy victim of sickness. The vital accounting areas like Depreciation, Retained Earning, Working Capital, Dividend Policy, Stock Valuation Method etc. received less priority in management decision-making. As a result, the organisations failed to make an intelligent use of these accounting policy areas in augmenting its earning power and competitive strength. The analysis of non-financial information further indicated that accounting tasks were not performed properly which gave rice to high incidence of geard capital increasing Audit and Aubmission Lag etc.

The univariate ratio analysis further corroborated the finding that the industrial units were sick which was evidenced by low, declining or negative value of the ratios over a period of time. The result of Multivariate analysis also showed that the

sample industrial enterprises were sick since the calculated value of Z-score fell below the prescribed cut off point of $Z = 2.675$ and $Z = - 1.95$.

The researcher and academicians attributed Government Policy, low risk perception of the entiprinious, shortage of trained and efficient managerial personnel and absence of commitment towards specified goal as the potential cause of Industrial Sickness of Bangladesh.

Table 5.28 : Accounting variable : Gross Profit (Taka in 000's)

Company Code No.	Year				
	1984	1985	1986	1987	1988
A ₁	8947	10800	13580	14271	14394
A ₂	(2485)	(2206)	(2343)	(2300)	6268
A ₃	19862	9629	24608	28445	52234
A ₄	168	6768	9311	15255	16992
A ₅	18255	14299	2329	9181	3374
A ₆	62500	98300	105674	-	-
A ₇	(211)	6516	12234	10689	11509
A ₈	4258	3811	9333	4692	5425
A ₉	12711	4609	4764	(10445)	10653
A ₁₀	2656	2914	3093	2934	3452
B ₁	366	(120)	(476)	-	-
B ₂	NIL	1264	2509	-	-
B ₃	NIL	6405	3591	1421	(1806)
B ₄	1541	2472	2217	2806	1209
B ₅	3211	13267	9280	14116	-
B ₆	2604	1019	508	-	-
B ₇	83460	8038	8622	8331	7252
B ₈	9542	(3411)	(7062)	(539)	-
B ₉	2700	3200	3400	1946	1830
B ₁₀	9076	10912	13000	12700	-
B ₁₁	1732	3000	1471	2551	1571
B ₁₂	947	588	266	1761	1680
B ₁₃	130	(1821)	(504)	(14)	-
B ₁₄	(3000)	(1725)	(2264)	(4464)	-

Table 5.29
Accounting Variables EBIT [Earning before Interest and Taxes

Company Code No.	Year				
	1984	1985	1986	1987	1988
A ₁	13247	14325	16142	6914	20552
A ₂	(4062)	(3363)	(3820)	4053	3700
A ₃	16223	1552	8209	17103	50740
A ₄	3466	4268	7088	12379	13196
A ₅	555	9305	12145	8270	8006
A ₆	71571	95173	92895	-	-
A ₇	(2584)	3852	8416	7476	7291
A ₈	4289	5393	6103	5102	7316
A ₉	1919	1704	1552	(14845)	(14894)
A ₁₀	272	537	546	1079	(2756)
B ₁	(230)	(120)	(894)	-	-
B ₂	NIL	115	1508	-	-
B ₃	NIL	4070	(1349)	(2008)	(4925)
B ₄	1286	2055	1855	2144	483
B ₅	(206)	6649	7144	7550	-
B ₆	2100	585	69	-	-
B ₇	4037	2820	4680	3137	690
B ₈	(557)	(3645)	(9199)	3750	(2782)
B ₉	2364	3200	2070	347	407
B ₁₀	1770	2918	3633	2458	-
B ₁₁	(2835)	(397)	935	2120	804
B ₁₂	415	(1200)	(2119)	(4372)	281
B ₁₃	1292	(1837)	(1869)	8233	-
B ₁₄	NIL	NIL	NIL	NIL	-

Table 5.30
Accounting Variable [Earning After Interest and Taxes] EAIT

Company Code No.	Year				
	1984	1985	1986	1987	1988
A ₁	2735	3200	2680	2777	2162
A ₂	(6497)	(6062)	(6125)	(5725)	1647
A ₃	10435	6037	24930	26515	8258
A ₄	(5245)	1785	4691	11124	12319
A ₅	2381	(4371)	9526	3670	5493
A ₆	6492	39710	39698	-	-
A ₇	(9011)	(1209)	1100	2168	3187
A ₈	3354	3811	4516	4808	6039
A ₉	2544	4178	7107	3079	1589
A ₁₀	(910)	(638)	(934)	(119)	5603
B ₁	(50)	(693)	(1194)	-	-
B ₂	NIL	(147)	1031	-	-
B ₃	NIL	2747	(1713)	(4954)	(11316)
B ₄	896	1082	508	719	(508)
B ₅	(5831)	(1576)	2197	3645	-
B ₆	1900	566	12	-	-
B ₇	7118	5108	245	140	456
B ₈	2046	2535	1851	1562	(1992)
B ₉	1891	2063	2268	1854	2230
B ₁₀	334	539	1064	709	-
B ₁₁	(2835)	(397)	935	2120	804
B ₁₂	9	(1202)	(2121)	(2255)	(1818)
B ₁₃	(1568)	(6855)	(11842)	(16724)	-
B ₁₄	NIL	NIL	NIL	NIL	-

Table 5.31 : Accounting Variable : Retained Earning

Company Code No.	Year				
	1984	1985	1986	1987	1988
A ₁	1428	442	248	125	207
A ₂	(6496)	(2558)	(8683)	(24408)	(23407)
A ₃	10864	13709	20151	22067	18415
A ₄	524	928	3969	11809	20777
A ₅	2492	(1764)	(473)	7831	12660
A ₆	144	4090	8090	-	-
A ₇	(8998)	(10207)	(10122)	(10174)	(9982)
A ₈	3354	3811	4516	4808	6039
A ₉	644	3986	11985	2793	15034
A ₁₀	(959)	(4307)	(5084)	(6018)	(6028)
B ₁	(50)	(1693)	(1194)	-	-
B ₂	NIL	(147)	1031		
B ₃	464	487	(3022)	(5377)	(12606)
B ₄	1017	325	495	719	(505)
B ₅	(11433)	(13009)	118	803	-
B ₆	2694	3234	3244	-	-
B ₇	2118	2524	2731	2861	3295
B ₈	2635	60	225	1502	(1256)
B ₉	NIL	NIL	NIL	NIL	NIL
B ₁₀	11337	11874	12990	13699	-
B ₁₁	(4935)	(5332)	(7666)	(9404)	(12616)
B ₁₂	(497)	(1699)	(5948)	(8103)	(10192)
B ₁₃	(1568)	(6855)	(11842)	(16724)	-
B ₁₄	(32000)	(4725)	(6986)	(11450)	-

Table 5.32 : Accounting Variable : Working Capital (Taka)

Company Code No.	Year				
	1984	1985	1986	1987	1988
A ₁	16255	9827	5934	12630	27350
A ₂	428	(746)	(26)	322	(2018)
A ₃	(2208)	(4211)	20571	17431	42409
A ₄	(2209)	1844	3042	8526	17013
A ₅	(2800)	(2609)	(17974)	(17974)	(43041)
A ₆	(56710)	(23735)	(89742)	-	-
A ₇	13723	13381	16385	13490	(28844)
A ₈	6255	11667	14866	18167	18473
A ₉	1619	4026	8030	6718	5203
A ₁₀	(212)	(203)	(266)	(223)	(121)
B ₁	(7581)	(1423)	(2842)	-	-
B ₂	5339	3771	NIL	-	-
B ₃	(8107)	(771)	(8800)	(13663)	(19891)
B ₄	2674	90990	6136	(88)	56
B ₅	(3068)	1138	12527	8524	-
B ₆	1374	2311	(2395)	-	-
B ₇	4610	4181	3688	3403	3897
B ₈	1863	3259	6319	11001	(4111)
B ₉	5834	5185	5531	3270	2626
B ₁₀	34648	23355	38786	60761	-
B ₁₁	344	2620	3600	1446	839
B ₁₂	4178	7898	(2217)	206	(1102)
B ₁₃	(324)	(5182)	(6962)	(7680)	-
B ₁₄	(3163)	(5122)	(7152)	(14404)	-

Table 5.33 : Accounting Variable : Shareholders Net Worth

Company Code No.	Year				
	1984	1985	1986	1987	1988
A ₁	8913	15206	15475	18860	16034
A ₂	363	4279	5506	7087	5520
A ₃	26011	79250	105034	111967	133720
A ₄	2300	5052	7370	14895	301150
A ₅	7034	12467	9396	6424	9374
A ₆	45624	145342	142597	-	-
A ₇	(2067)	(6176)	(6293)	34456	3097
A ₈	1963	(1378)	1880	(600)	3427
A ₉	8963	12571	20525	21758	23562
A ₁₀	(2712)	(3375)	(4097)	4298	3909
B ₁	(78)	(622)	(1462)	-	-
B ₂	7892	11967	NIL	-	-
B ₃	13391	14071	10727	8571	1224
B ₄	2363	2512	1912	2380	8537
B ₅	(4391)	(5712)	12781	14079	-
B ₆	4495	5219	5703	-	-
B ₇	10060	100523	10733	10879	11317
B ₈	8461	11422	15121	20323	6283
B ₉	7350	8085	8858	9485	10129
B ₁₀	5013	27789	34309	34911	-
B ₁₁	(2049)	(2444)	(5070)	(2184)	(4665)
B ₁₂	(31)	(446)	(5044)	(7775)	(8310)
B ₁₃	344	(4747)	(9920)	(14740)	-
B ₁₄	(609)	(2568)	(4858)	(9690)	-

Chapter - VI

Summary and Conclusion of the Study

6.1 The Problem :

Industry occupies a pivotal position in the economy of a country. The economic growth of a country hinges heavily on the growth and expansion of the industrial sector which is supposed to help the growth of other two sectors of the economy namely agriculture and services. If due to some reason or other, the industrial sector is rendered incapable of fostering the balanced growth of the economy, it gives rise to "structural weakness" in the economy and eventually leads to the problem of Industrial Sickness. In case of Bangladesh also, a similar pattern of growth has stagnated the industrial sector and it is under the grip of severe sickness.

Just like any other developing country of the world, Bangladesh embarked upon an ambitious plan for its industrial development. Immediately after independence, BSB was established to provide project loan to the budding entrepreneurs of the country and thereby help the growth of industry. Since inception till June 1990, BSB has disbursed project loan to the tune of Tk. 5190.16 million. But unfortunately, subsequent events show that pumping of such huge resources in the industrial sector has failed to produce the desired results. Even after two decades of planned development process, the contribution of industrial sector to the GDP has remained static around 10 percent end there has been no improvement in respect of labour productivity, capacity utilization and Manufacturing Value Added index.

The first symptom of malfunctioning in industrial sector became apparant from a BIBM seminar which put the figure of outstanding/stuck-up loan to Tk. 1603 crore upto 31.12.85. Keeping pace with the volume of outstanding loan, in the banks and DFI's, the number of sick industrial units rose to 1500 as on 30.10.91. The adverse impact of Industrial Sickness and outstanding loan recovery problem on the fragile economy became very clear from the address of Former Acting President Justice Shahabuddin Ahmed to the Fourth National Assembly. He disclosed that a staggering figure of Tk. 15000 crore is lying blocked in problem/sick projects of Bangladesh. He further added that the country's import bill stood at Tk. 12000 crore as against a export earning of Tk. 4000 crore which depicts the precarious condition of the economy.

The figure of outstanding loan was again updated to Tk. 22000 crore by Governor of Bangladesh Bank out of which Tk. 6000 crore has already become bad and irrecoverable. Such blockage of huge resources in problem/sick projects has severely impaired the lending capacity of the banks and DFI's and the industrial units (both public and private) are unable to have access to the required credit facilities.

Thus the problem arising out of Industrial Sickness has become grave enough with the passage of time. The government on its part has tried to arrest the deteriorating trend in the performance of the industrial sector by initiating legal action against habitual defaulters, offer of financial incentive to encourage loan repayment, formation of Sick Industries Rehavilitation Cell, Industrial Development Council etc. But

these efforts have not been helpful in mitigating the intensity of the problem of Industrial Sickness. Thus for a meaningful solution of the problem, the present study has made a modest attempt to examine the same exhaustively and evolve suitable solution to this burning question of the day.

6.2 Summary of the Study :

The main theme of the study was Industrial Sickness in Bangladesh and its underlying causes. Some of the other objective of the study were to evolve a suitable definition of Industrial Sickness including its timely identification and forecasting. A sick industry has been defined as one which is incurring heavy losses, Net Worth has been eroded by 50 percent, Working Capital is negative and profit after meeting all expenses becomes equal to or less than current interest burden.

An industrial unit might become sick due to adverse external factors and internal factors (management inefficiency). Industrial Sickness does not occur overnight but develops over a period of time. Some industrial units may again be born sick, made sick or sickness may be thrust upon it. A sick industrial unit also show some symptom which has to be monitored properly for its early solution.

A review of economic literature on the topic of sickness of industrial unit over the last two decades or so suggest that accounting ratios can be used in predicting sickness with grater accuracy. The hypothesis of the study was that sickness could have been avoided if the management was careful enough in

calculating and evaluating financial ratios for the purpose of monitoring the performance of an industrial unit.

For the purpose of testing the hypotheses, attention was placed on 24 BSB-financed sample industrial units belonging to six industrial sub-sectors, e.g., Textile, Food and Allied, Paper and Paper Products, Electrical Goods, Chemical and Pharmaceutical and Cold Storage. These sectors were selected for the study since 67 percent of the project loan were lying blocked in them and incidence of sickness ranged from 80 to 100 percent.

Research methodology followed comprised of extensive analysis of the sample industrial unit with special emphasis on its Annual Accounts Report (Trading Account, Profit and Loss Account and Balance Sheet) which was collected for a maximum of five and minimum of three years. The tools of research were literature survey, field investigation with open-end questionnaire, pilot survey, evaluation of non-financial information and ratio analysis (Univariate and Multivariate Approach). Under Univariate Approach, an attempt was made to predict sickness on the basis of single ratio analysis. Multivariate Analysis on the other hand, tried to predict sickness on the basis of MDA model which considers the combined influence of several financial ratios.

The results of the ratio analysis (Univariate Approach) showed that the sample industrial units were sick since their ratios were low, negative or declining. The results of the Altman Z-score and Taffler's Z-score (Multivariable Approach) also confirm our earlier finding that the industrial units were sick since the scores fell below the prescribed cut-off point of

2.675 and -1.95. This also meant that they had a greater propensity of becoming sick.

The researchers and academicians were of the view that prevailing economic indiscipline and callous attitude on the part of entrepreneurs were mainly responsible for Industrial Sickness in Bangladesh. The study further revealed that the industries in Bangladesh are becoming sick due to management inefficiency, poor feasibility study, wrong financial planning, lack of reliable accounting information system and neglect of accounting tools in making management decision (Internal Causes). The external group of causes of sickness comprised of high Customs and Excise duty, high cost of raw material power, fuel, and other input, inefficient and costly Transport and Communication system, Government Price Control, frequent pay and wage hike unaccompanied by corresponding rise in productivity, poor law and order situation, massive devaluation of Bangladesh Currency and rampant smuggling/imports of unwarranted products and locally competing goods.

An analysis of the non-financial information showed that all the industrial units had a heavy debt burden and the accounts preparation was neglected which gave rise to unusual Audit Lag and submission lag. The management of these units spent little time on its supervision since all of them had more than a number of other industrial units of their own. This gave them ample scope of diverting resources and avoid repayment of loan by portraying some of its units as losing one through "window-dressing".

The sample units also showed signs of management inefficiency

(one-man rule, management lethargy etc.) and did not care to improve their performance. They were also very much deficient in vital management areas, e.g. Finance, Production, Marketing and Personnel which was regarded by experts as "useful business precepts" for every successful industrial organisation. It was noted with disappointment that the sample industrial units made no sincere and deliberate effort to protect their units from sickness by calculating the accounting ratios regularly. In fact, they preferred to "drift away as a victim of fate rather than its master" and were more inclined to use sickness as a pretext for obtaining loan remission as well as fresh loan from the Government. Thus there is every reason to believe that most of the incidents of Industrial Sickness were fake which was mostly caused by malafide intention of the owners.] 918

6.3 Hypothesis Analysis

In course of the study, some specific hypothesis were tested which threw some light on the various causes of Industrial Sickness in Bangladesh. The results of the tests are discussed as follows:

1. The first hypothesis was that wrong and unrealistic Feasibility Report as a potential cause of Industrial Sickness in Bangladesh. It may be added here that a well-conceived feasibility report is the first essential step which could alone ensure healthy growth of an industrial unit. Any error or flaw committed at this vital embryonic stage would simply spell disaster for the same. This hypothesis was proved since it was

found in course of the study that this vital task has not been performed carefully by the concerned DFI's and entrepreneurs. In majority of the cases, the feasibility report was prepared in a mechanical and haphazard manner and sanctions were given to those projects which lacked economic viability.

2. The second hypothesis attempted to draw a casual relationship between poor demand forecasting, market survey etc. and Industrial Sickness was also proved. This became very much apparent from poor and declining sales revenue position of the sample industrial units. The sample units also did not pay any serious attention towards formulating Marketing plans and strategy, Product Diversification and carrying out research and development (R&D) did not receive due attention. Their low earning capacity which is caused by declining sales revenue had a very crippling effect on the liquidity, profitability and working capital position and eventually led to sickness.

3. The third hypothesis was that majority of industries in Bangladesh were either born sick or sick in fake sense. This hypothesis was proved since many of the sample enterprises developed sickness right at its inception due to improper assessment of capital requirement, choice of poor location, selection of wrong technology, inadequate economic survey etc. These initial problems continued to persist in the sample industrial units and adversely affected their efficiency and profitability. In course of investigation, it was found that some unscrupulous industrial entrepreneurs exaggerated difficulties

and diverted funds to other ventures for purely financial gains. When their own industrial unit failed as a result of fund diversion, uneconomic expansion, negligence etc., they manipulated the books of accounts to partray the unit as sick and used the same as a pretext for obtaining financial relief from banks, government and DFI's.

4. The fourth hypothesis was that industries in Bangladesh were becoming sick due to management incompetence which may be termed as the most "sickening" factor. This hypothesis was also proved since Bangladesh does not have adequate supply of qualified, trained and professionally-oriented managers, supervisors etc. Due to the shortage of required managerial staff, the sample enterprises could not avail themselves of their services. Besides, the management personnel actually hired by the sample enterprises could not perform vital managerial functions like Planning, Organisation, Direction, Coordination, Motivation and Control. They also could not employ qualified management staff due to poor earning position. The same limitation of poor earning also discouraged them from undertaking Management Development Plan and Manpower Plan. There was also no evidence of well-defined personnel policy.

5. The fifth hypothesis was that the industrial units in Bangladesh have become sick owing to wrong and unpragmatic Financial Planning. This hypothesis was also proved. The ratio analysis clearly showed that they did not attach adequate importance to financial policy and planning. This was evidenced by unbalanced Capital Structure and absence of well-planned

financing mechanism. The sample units also preferred to use overdose of borrowed money as compared to their Equity Capital. This produced very harmful effect on their performance and actual return fell below the Cost of Capital or the optimum rate of return under the influence of unstable external environment.

The sample units also suffered from under capitalisation and over capitalisation which again led to the problems of Undertrading and Overtrading. The foregoing problems are again the inevitable outcome of unbalanced Capital Structure. They also used highly geared Capital Structure and this showed that the management had a low perception about risks in the external environment.

6. The sixth hypothesis stipulated that lack of coordination among the industrial enterprises and concerned Government agencies was mostly responsible for Industrial Sickness in Bangladesh. This hypothesis was also proved. There was no coordination between the activities of the concerned parties. The DFI's, banks and the infrastructural development agencies like Power Development (PDB) Telephone and Telegraph Department etc. took unusually long time in providing project loan, project evaluation, provision of water, power, sewerage, gas and telephone facilities. Another outcome of this uncoordinated activities is that all banks and DFI's gave sanctoin to those industrial sectors which were already saturated. This creation of excessive capacity caused great hardship and tended to push a large number of sample industrial units towards sickness.

7. The seventh hypothesis related to the inadequency of the statutory provisions regarding preparation of accounts according to outdated Companies Act of 1913. This hypothesis was also proved. All the Joint Stock Company type of organisations (Public Limited Company and Private Limited Company) are required to follow the provisions of Companies Act 1913 regarding preparation of books of accounts, submission of Annual Accounts Report etc. This vintage piece of legislation which is older than three quarter of century is quite inadequate to combat the problem of Industrial Sickness effectively. This act has also turned out to be obsolete one in the light of modern accounting principles and conventions.

8. The eighth hypothesis was about the view that a sick industrial unit lags behind miserably in major functional areas of management namely Finance, Production, Marketing and Personnel. The results derived through the analysis of management performance and other non-financial information relating to the sample enterprises adequately supported the hypothesis. All the industrial units covered by the study performed poorly in all the aforesaid functional areas of management. The management also failed to appreciate the importance of the above areas of management and performed the same in a freelance manner. They were also found very busy in looking after other industrial enterprises in addition to the present one and hence had to depend on salaried staff who were mostly under-qualified and inefficient. The decision-making and exercise of authority was very much centralised which made the management lethargic and less receptive to the external dynamic environment. The

resulting outcome of such disappointing management performance was the sickness of the sample industrial units.

9. The ninth hypothesis maintained that an industrial unit tends to become sick due to the presence of unbalanced machinery, poor maintenance of machines and equipment and delayed/neglected BNRE programme. This hypothesis was also fully supported by the data. The study showed that the problem of unbalanced machinery was present among majority of the sample units. Due to low level of earning, the sample units also attached low importance towards proper upkeep and maintenance of machines and equipment. Such policy escalated the cost of production due to idle man-hour, machine-hour and lost production due to repeated mechanical breakdown. The much-needed BMRE programme could not be initiated in time due to low earning position and lack of necessary resources. All these deficiencies handicapped the industrial units and pushed them towards sickness.

10. The tenth and last hypothesis was that sick industrial units fails to generate necessary accounting data for cost-effective operation and the utility of accounting ratios remains virtually unrecognised. This hypothesis was also proved. All the sample industrial units attached lower emphasis on accounting (both finance and cost) which has been widely acclaimed as a vital decision making tools in the hands of management of an industrial unit. The sample industrial units were sick largely due to the utter neglect of preparation and maintenance of proper books of accounts by full time qualified accounting staff.

As a result, the vital task of calculating the necessary accounting ratio and their interpretation could not be undertaken since it depends on installation and maintenance of standard Accounting Information System. The sample units lacked such accounting information system and the management could not recognise its importance in detecting sickness as there was no one to provide the requisite expert advice. It may be noted with regret that the sample units also deliberately ignored the utility of Cost Accounting techniques in enhancing its efficiency. Besides maintaining rudimentary historical accounting information, the technique of Cost Control, Cost Reduction, creation of Cost Consciousness continued to be neglected even by large industrial units. Failure in employing qualified and full-time accounting staff can again be attributed to poor operating result and low earning position of the aforesaid sick sample industrial units.

6.4 Conclusion and Suggestion :

On the basis of foregoing discussion, it can be safely concluded that Industrial Sickness is a normal event in the realm of industry and it should be accepted as a part and parcel of our modern economic life. Instead of becoming annoyed or exasperated, the problem of Industrial Sickness should be viewed in its correct perspective and no stone should be left unturned to find solution to the same. In this respect, management equipped with all the techniques of modern professional management including accounting ratio analysis can play a very

effective role in combating sickness. Further the management should pay proper attention to preparation and maintenance of upto date books of accounts and evaluat the same regularly.

Even though the GOB has adopted a number of policy measures to tackle Industrial Sickness but the problem appears to persist and even worsen. Therefore, it is quite clear that such isolated afforts by Government are not enough to solve the problem. A coordinated and comprehensive plan of action involving all the parties namely entrepreneur, Government, DFI's, banks, Ministries etc. is required to solve the problem. On the basis of feedback received through the study, the author would like to suggest the following measures aimed at ameliorating the situation caused by Industrial Sickness. They are :

- (a) Bring suitable amendments to all existing legal provisions affecting industry namely Companies Act 1913, Income Tax Act 1922, and other fiscal and monetary regulation;
- (b) Improvement and expansion of existing transport and communication facilities in the country;
- (c) The reduction of System Loss in power generation and distribution and ensure its regular supply at a reasonable cost;
- (d) Ensure proper coordination among Bangladesh Bank, DFI, NCB, Ministry of Industry, Ministry of Finance etc. to adopt a common strategy regarding industrial financing and promotion;

(e) Formulation of comprehensive Manpower Development Programme in order to ensure regular supply of trained and qualified managers, accountants and other supporting staff for the various industrial units of the country;

(f) Reorganise the DFI's to make it more effective in exercising greater control over borrowers, monitor their performance, evaluate Feasibility Report and timely provision of required capital, technology and management advice. The Special Studies Department (SSD) in the DFI's should be revived with immediate effect.

(g) Incorporate greater rationality in project appraisal. It has been found that a large number of industrial units have been set up in Bangladesh with the lavish financial support from the BSB. In most of the cases, the project appraisal procedure was not realistic enough and the analyst was more obsessed with pre-specified target of sanction and disbursement of loan. As a result, the project appraisal process was vitiated and was driven more by a desire to reach a norm of sanction and less by a desire to promote genuinely viable industrial project. Thus it would be worthwhile to implement a judicious and business-like project appraisal methodology for all project proposals placed before the banks and DFI's for approval;

(h) Install greater stability in Government policy. Informed sources connected with the industrial sector of Bangladesh argue that most of the industrial sickness is caused by abrupt change in Government policy with respect to licencing, import, export, customs and excise duty, taxation etc. Many industrial units have

come to grief due to unanticipated change in Government policy which posed a potential threat to their viability. Thus there was a great need for formulating a more stable and rational structure of Government policy in key areas of management having direct bearing on industry;

i) Undertake comprehensive remedial measures. In addition to rationalisation of Government policy, fiscal measures etc. A viability study should be conducted to tackle industrial sickness. Such study should cover areas like market, production/technical problem, finance, personnel, organisation structure and environment. It must be added here that revival of a sick unit back to health requires a comprehensive Rehabilitation Scheme that is based on sound diagnosis of the condition of the unit;

(k) Undertake restructuring of regulatory framework. In view of the regulatory framework prevailing in Bangladesh, the management of an industrial unit (public and private) lacks the freedom and flexibility to use the levers or instruments available to their counterparts in the advanced countries. For example, they cannot retrench workers beyond a certain limit, introduce new product in the market or they cannot resort to merger and amalgamation in times of need. Given these constraints, it would be naive to expect a dramatic turnaround of the kind achieved by Chrysler Corporation or ICI group. In order to provide greater flexibility and freedom to the owners of industrial units in Bangladesh, a basic change in the regulatory measures is urgently required. The envisaged change should be made in such a way so that it provides

greater latitude to management to tackle dynamic environmental factors by using its own initiative and imagination, and rely less on Government support or largesse of the Government authorities.

Some of the other potential areas where further research could be undertaken are :

- (a) Management Audit and its Role in enhancing management efficiency in Bangladesh;
- (b) Improvement in Labour-Management Relationship in Bangladesh;
- (c) Business Cycle and its implication in the industrial sector in Bangladesh;
- (d) ~~Critical~~ evaluation of DFI's as a catalyst of industrial development in Bangladesh;
- (e) Critical evaluation of existing taxation/fiscal measures and there incidence on the industrial growth of Bangladesh.

HABIBULLAH
(Western), Ph. D. (Dhaka)
or of Accounting and
Faculty of Commerce.



ARTS FACULTY BUILDINGS

UNIVERSITY OF DHAKA
DHAKA-1000, BANGLADESH
Off. 508957
Phone : Res. 503074

26.09.1988

This is to certify that Mr. Mir Nazmul Karim, Assistant Professor, Department of Humanities, University of Engineering and Technology, Dhaka is a registered Ph.D. student of the Department of Accounting, University of Dhaka. He is engaged in his research under my supervision. He is working on "Causes of Industrial Sickness". He has already completed theoretical work on Industrial Sickness. He now plans to collect data from some selected industrial units of Bangladesh. Your enterprise is one of his samples. For the purpose of his study, he needs authentic and reliable information about your enterprise. We are requesting you to be so good as to extent co-operation to Mr. Karim.

On completion of the study, you can get a summary of his findings which I am sure, you will find useful for improving the effectiveness of your enterprise. We assure you that the identity of your firm will be kept absolutely confidential. His analysis will contain information in aggregate sense only.

We hope that our academic exercise will receive your full co-operation.

Thanking you.

A handwritten signature in black ink, appearing to read "Habibullah", with a long horizontal flourish extending to the right.

(M. Habibullah)
Dean.

Appendix-A

Recommendation letter from Supervisor

APPENDIX - B

To
The Managing Director

From
Mir Nazmul Karim
Asstt. Professor
Department of Humanities
Bangladesh University of
Engineering & Technology
Dhaka.

Date _____

Dear Sir,

The undersigned is a registered Ph.D. student in the Department of Accounting, University of Dhaka. For the purpose of research, the copies of audited Annual Accounts Report of your esteemed enterprise has become urgently necessary. It would be of immense help for the research if you are generous enough to comply with the above request. Please find enclosed herewith a copy of letter from my supervisor which amply elaborates the theme and purpose of research work. I firmly believe that you would be gracious enough to extend all necessary cooperation and oblige thereby. Here I would like to assure you that all information furnished would be treated as strictly confidential and used entirely for research purpose.

If you have made up your mind to help me in the above noted research work by providing the necessary information, then please send the bottom portion of this letter to my address after duly filling in the same. Expecting best of cooperation and help. Thanking you.

Yours Sincerely,

(Mir Nazmul Karim)

1. Do you have audited Annual Accounts Report for the last five years ?

	Yes	No
--	-----	----
2. If available, would you please furnish the same

	Yes	No
--	-----	----
3. If you do not have five years annual report, what is the minimum number of yours for which you could send the same

	Yes	No
--	-----	----
4. How much time would be required to send the report

	2 weeks	3 weeks	4 weeks
--	---------	---------	---------
5. Who would provide the postal charge

	Sponsor	Enterprise
--	---------	------------

APPENDIX - C

To
The Managing Director

From
Mir Nazmul Karim
Asstt. Professor
Department of Humanities
Bangladesh University of
Engineering & Technology
Dhaka.

Date _____

Subject : Request for furnishing certain accounting information required in connection with a dissertation work on Industrial Sickness.

Dear Sir,

Accept my best regards. It may be added here that I am a registered Ph.D. student in the Department of Accounting, University of Dhaka. In connection with the above noted research, certain accounting information is urgently required in respect of your reputed industrial organisation which has been included in my sample.

Please find enclosed herewith some copies of proforma Cost Statement, Income Statement, Balance Sheet and Statement of Non-Financial Information. You don't have to sign or write or sign on the form. Please fill in the figures in the required place indicating the financial year clearly and then return the same to my address. I would remain ever grateful to you for your kind and sincere help. I would like to assure you that the furnished information would be treated as strictly confidential and used entirely for research purpose. Thanking you.

Yours Sincerely,

(Mir Nazmul Karim)

APPENDIX - DPILOT SURVEY QUESTIONNAIRE

Date : _____

Name of the respondent

We want to know the various reasons which are hampering the vital manufacturing and marketing operation and pushing your organisation towards loss instead of earning a profit.

1. Power supply problem

Major problem

Minor problem

Moderate problem

Insignificant problems

2. Problem regarding acquisition of input

Major problems

Minor problems

Moderate problems

Insignificant problems

3. Problems regarding marketing/export of product.

Major problems

Minor problems

Moderate problems

Insignificant problems

4. Problems regarding acquisition of loan

Major problems

Minor problems

Moderate problems

Insignificant problems

5. Problems regarding storage of product

Major problems

Minor problems

Moderate problems

Insignificant problems

6. Problems regarding acquisition of working capital

Major problems

Minor problems

Moderate problems

Insignificant problems

- | | | |
|-----|--|------------------------|
| 7. | Problems faced in acquiring technical know how | |
| | Major problems | Minor problems |
| | Moderate problems | Insignificant problems |
| 8. | Problems faced in acquiring trained and qualified labour and staff | |
| | Major problems | Minor problems |
| | Moderate problems | Insignificant problems |
| 9. | Problems created by Trade Union and union leaders | |
| | Major problems | Minor problems |
| | Moderate problems | Insignificant problems |
| 10. | Competition problems in the domestic market | |
| | Major problems | Minor problems |
| | Moderate problems | Insignificant problems |
| 11. | Transport availability problems | |
| | Major problems | Minor problems |
| | Moderate problems | Insignificant problems |
| 12. | Communication problems | |
| | Major problems | Minor problems |
| | Moderate problems | Insignificant problems |
| 13. | Customs and Excise duty problems | |
| | Major problems | Minor problems |
| | Moderate problems | Insignificant problems |
| 14. | Income Tax Problems | |
| | Major problems | Minor problems |
| | Moderate problems | Insignificant problems |

15. Machine Repair problems
- | | |
|-------------------|------------------------|
| Major problems | Minor problems |
| Moderate problems | Insignificant problems |
16. Product quality maintenance problems
- | | |
|-------------------|------------------------|
| Major problems | Minor problems |
| Moderate problems | Insignificant problems |
17. How much time do you devote in looking after the management of your enterprise ?
- | | | |
|----------|----------|----------|
| 8 hours | 10 hours | 12 hours |
| 14 hours | 16 hours | |
18. Do you any other business in addition to the present one ?
- | | |
|-----|----|
| Yes | No |
|-----|----|

APPENDIX - E

Questionnaire for eliciting the opinion of the entrepreneurs regarding causes of Industrial Sickness.

General Information

1. Name of the industrial unit -----
 Public Limited Company
 Private Limited Company
2. Address :
- (a) Head Office -----
 (b) Factory -----
3. Date of Incorporation -----
 Date of receiving certificate -----

of Commencement of Business

Date of commercial production -----

4. To what extent the following have been performed before setting up the industry ?
- | | | | | | |
|--|-----|----|----|----|----|
| (a) Project Feasibility Study | 100 | 80 | 60 | 40 | 20 |
| (b) Demand and Market Analysis | 100 | 80 | 60 | 40 | 20 |
| (c) Economic and Technical Feasibility | 100 | 80 | 60 | 40 | 20 |
| (d) Financial Planning | 100 | 80 | 60 | 40 | 20 |
| (e) Plant Layout | 100 | 80 | 60 | 40 | 20 |
| (f) Material Handling Plan | 100 | 80 | 60 | 40 | 20 |
5. Extent of your experience in the respective line of business?
- | | | | | | |
|--|-----|----|----|----|----|
| | 100 | 80 | 60 | 40 | 20 |
|--|-----|----|----|----|----|
6. While establishing the industry, extent to which the following criteria influenced your decision
- | | | | | | |
|--|-----|----|----|----|----|
| (a) By looking at the progress in the prospective field | 100 | 80 | 60 | 40 | 20 |
| (b) By formulating a plant of your own | 100 | 80 | 60 | 40 | 20 |
| (c) Your have been persuaded by DFI | 100 | 80 | 60 | 40 | 20 |
| (d) Your sound financial position encouraged you | 100 | 80 | 60 | 40 | 20 |
| (e) After obtaining training and orientation in the respective field of industry | 100 | 80 | 60 | 40 | 20 |
7. Your opining regarding extent of help from DFI
- | | | | | | |
|--|-----|----|----|----|----|
| | 100 | 80 | 60 | 40 | 20 |
|--|-----|----|----|----|----|
8. Extent of help from the government
- | | | | | | |
|--|-----|----|----|----|----|
| | 100 | 80 | 60 | 40 | 20 |
|--|-----|----|----|----|----|

9. To what extent the industrial investment in Bangladesh is healthy	100	80	60	40	20
10. Extent to which the following are liable for industrial sickness in Bangladesh					
(a) Entrepreneurs	100	80	60	40	20
(b) Financial Institution and Bank	100	80	60	40	20
(c) Government Agencies	100	80	60	40	20
(d) General Economic condition	100	80	60	40	20
(e) Infrastructural facility	100	80	60	40	20
11. Extent to which you anticipated the risks in advance	100	80	60	40	20
12. In your opinion the extent to which you possessed the skill and experience to plan the activation of your enterprises					
(a) Ability to plan enterprise activities	100	80	60	40	20
(b) Ability to train and develop required manpower	100	80	60	40	20
(c) Ability to communicate with your personal, customer bank and government agencies	100	80	60	40	20
(d) To sell your product	100	80	60	40	20
(e) To make decision in a timely basis	100	80	60	40	20
(f) To analyse cost and benefit of alternative courses of action relating to a particular decision area	100	80	60	40	20
(g) To estimate requirement of finance	100	80	60	40	20
(h) To keep record of income and expenses	100	80	60	40	20

(i)	To determine the cost of production of your factory for fixing the selling price	100	80	60	40	20
(j)	To figure out the strength and weakness of your competition	100	80	60	40	20
(k)	To prepare and implement the production plan	100	80	60	40	20
(l)	To install and maintain machine and equipment	100	80	60	40	20

APPENDIX - FNon-financial Information

Questionnaire used for collecting certain non-financial information from the entrepreneurs.

1. Age of the company in years -----
2. No. of current directors -----
3. Has there been any new director over the last 3 years ?
No = 0 Yes = 1
4. Has any director left the company over the last 3 years ?
No = 0 Yes = 1.
5. No. of non-director shareholders -----
6. Has there been any new share-capital introduced ?
No=0 Yes= 1
7. Has there been any change of auditor over the last 3 years period ?
No = 0 Yes = 1.
8. Has the auditor made any qualified audit report over the last 3 years period ?
No = 0 Yes = 1.
9. Has the company received any qualified auditor report in the current years ?
No = 0 Yes = 1
10. Has the company received any 'going concern qualification ?
No = 0 Yes = 1.

APPENDIX - G

Table : Rate of Capacity Utilisation and Productivity

Industrial Product	Installed Capacity	Output (1984-85)	Rate of Capacity Utilisation 1984-85	Labour Productivity 1983-84 Taking 1979 80-100
Jute Textile '000 tons	1150 (1035)	561	48.8	92.0
Cotton Textile Million kgs.	90 (160)	59	66.0 (82.52)	135.8
Cement ('000 tons)	390	260	66.7 (72.2)	80.0
Fertilizer ('000 tons)	(360) 1139(1080)	806	70.8 (75.9)	131.8
Paper and News Print('000 rons)	123 (111)	90	73.2 (70.9)	83.2
Steel Ingot ('000 tons)	250 (150)	101	40.0 (66.7)	82.0

\$ Figures in parentheses indicate attainable capacities

Source: Third Five Year Plan: Government of Bangladesh. p. 228.

APPENDIX - H

Table: Target and Output of Major Industrial Products

Industrial Production	Unit	1979-80 Actual	1984-85	
			Target	Achievement
1. Jute Textile	('000 tons)	525.0	650.0	561.0
2. Cotton Textiles (Yarn only)	(Million tons)	43.2	83.2	59.0
3. Fertilizer	('000 metric tons)	442.0	1057.0	806.0
4. Cement	Do	343.0	450.0	240.0
5. Paper and News Print	Do	71.9	93.0	90.0
6. Sugar	Do	93.2	200.0	86.0
7. Steel Inget	Do	133.0	225.0	101.0

Source : Third Five Year Plan (1985 -90), Government of
Bangladesh, p. 31.

APPENDIX - I

Outstanding Loans and Advances and Overdues of
Private and Public Sector of BSB
During FY 1972 to FY 1985

As on	Outstanding loans and advances			Overdues		
	Private Sector	Public Sector	Total	Private Sector	Public Sector	Total
June 30, 1973	-	-	772.8	-	-	273.7
June 30, 1974	-	-	811.7	-	-	372.2
June 30, 1975	-	-	1081.9	-	-	488.2
June 30, 1976	234.2	998.0	1232.2	103.2	529.0	1632.2
June 30, 1977	288.0	955.5	1243.5	106.8	138.7	245.5
June 30, 1978	425.4	960.8	1386.2	157.4	82.5	239.9
June 30, 1979	719.1	786.7	1705.8	174.7	167.9	342.6
June 30, 1980	1144.2	879.5	2023.7	260.7	116.7	377.4
June 30, 1981	1705.5	770.5	2476.0	361.8	91.2	453.0
June 30, 1982	2644.0	680.5	3324.5	624.7	94.5	799.2
June 30, 1983	3655.5	662.0	4317.5	991.7	168.4	1168.1
June 30, 1984	4683.5	269.3	4952.8	1522.0	94.0	1616.0
June 30, 1985	5476.2	197.8	5674.0	2120.8	77.3	2198.1
June 30, 1986	5985.2	122.1	6107.3	2627.5	45.9	2673.4

Source : BSB

APPENDIX - JOverdues by Industrial Sector of Bangladesh Shilpa BankDuring FY 1972 to 1985

(Figures in percentage)

Sector	Amount Overdue in Percentage
1. Food and Allied Products	23.7
2. Jute and Cotton Products	20.5
3. Cotton, Woolen, and Synthetic Products	11.3
4. Paper, Paper Products and Printing	9.5
5. Tannery, Leather and Rubber Products	2.0
6. Non-Metallic Metal Products	1.5
7. Engineering Industries	5.2
8. Transport Equipments	8.1
9. Chmicals, Pharmaceuticals and Allied Products	7.9
10. Service Industries	7.9
11. Others	2.5
	Total 100.00
	=====

APPENDIX - KCOST STATEMENT FOR THE YEAR.....

Previous year Tk.		Tk.	This year Tk.
*****	Opening stock of materials	*****	*****
*****	Purchase of materials	*****	
*****	Expenses on purchases	*****	
*****	Materials available	*****	
*****	Less: Closing stock of materials	*****	
*****	Materials consumed (A)		*****
*****	Direct Labour cost (B)		*****
*****	Add: Opening stock of work-in-progress (C)	*****	
*****	Less: Closing stock of work-in-progress	*****	*****
*****	Prime cost (A)+(B)+(C) = (D)		*****
*****	Manufacturing expenses (E)		*****
*****	Factory depreciation (F)		*****
*****	Cost of production (D) + (E) + (F) = (G)		*****
*****	Opening stock of finished goods (H)		*****
*****	Cost of goods available for sale (G) + (H) = (I)		*****
*****	Less: Closing stock of finished goods (J)		*****
*****	Cost of goods sold (I) = (J) = (K)		*****

APPENDIX - I

INCOME STATEMENT FOR THE YEAR ENDED

	Tk.	This year Tk.	Previous year Tk.
Gross sale proceeds			
Less: Returns	_____	_____	_____
Sales tax			
Net sales for the year (1)
Cost of goods sold (1) (as per cost statement)
Gross Profit or Margin (1-2)=(3)			
Other Operating expenses (4) :			
Administration expenses		
Distribution expenses		
Selling expenses		
	_____	_____	_____
Operating Profit or Earnings before interest and tax (EBIT) (3) = (5)	
		_____	_____
Non-trading income and interest etc. received (6)			
Interest paid (7)
Net Profit before Tax (PBT) (6-7) = (8)
Taxation (9)
Profit after tax (PAT) (10)
Amount written off/appro- priated, provision for dividends, etc. (11)
	_____	_____	_____
Income carried forward (12) ===== ===== =====

APPENDIX - MBalance Sheet as on _____

Cash in hand			_____
Cash at bank			_____
Bills Receivable			_____
Book debt less provision			_____
Marketable Trade Investment			_____
	Liquid assets (1)	Total	XXXXXXXXXX
Add Inventories (2)			XXXXXXXXXXXX
Current assets 1 + 2 = (3)		Total	XXXXXXXXXXXXXX
Bills payable			XXXXXXXXXXXXXX
Creditors for supply of goods			XXXXXXXXXXXXXX
Creditors for expenses			XXXXXXXXXXXXXX
Bank Overdraft			XXXXXXXXXXXXXX
Other increased creditors			XXXXXXXXXXXXXX
Other Liabilities to be paid within a year time including			XXXXXXXXXXXXXX
Current Liabilities (4)		Total	XXXXXXXXXXXXXX
Provision for Taxation _____			
Dividend payable report _____			
Other Provision _____			
Provision (5) Total	XXXXXXXXXX	Total	XXXXXXXXXXXXXX
(4+5) = 6			
Net Current Assets (Net Working Capital)		Total	XXXXXXXXXXXXXX
(3 - 6) = (7)			_____
Motor Vehicle	XXXXXXXXXX		
Land and Building	XXXXXXXXXX		
Plant and Machinery	XXXXXXXXXX		
Loose Tools	XXXXXXXXXX		
Furniture and Fixture	XXXXXXXXXX		_____
Fixed Assets (8)			_____
Capital Employed (7 + 8) = 9		Total	XXXXXXXXXXXXXX

Investment in Government	_____	
Investment in	_____	
Other investment	_____	
Other assets (non-trading)	_____	
		XXXXXXXXXXXXXX
Non-business assets (10)		_____
Company's Net assets (9 + 10) = (11)		XXXXXXXXXXXXXX

- % Debenture	XXXXXXXXXXXXXX	
- % Secured Loan	XXXXXXXXXXXXXX	

Secured Loan	XXXXXXXXXXXXXX	
Add % Loan (Increased)	XXXXXXXXXXXXXX	
	XXXXXXXXXXXXXX	
Long-term loan (12)		_____
Shareholders, Net Worths 11 + 12 = (3)		Tk. XXXXXXXXXXXXX
Add - % Preference share capital (14)		XXXXXXXXXXXXXX
Equity Shareholders		Tk.
Net Worth 13 - 14 = (15)		Total XXXXXXXXXXXXX

<u>Represented by</u>		
Equity Share Capital	XXXXXXXXXXXXXX	
Forfeited shares	XXXXXXXXXXXXXX	
Reserves	XXXXXXXXXXXXXX	
Surplus	XXXXXXXXXXXXXX	

Equity Shareholder claim		Tk. XXXXXXXXXXXXX
Less Accounted	XXXXXXXXXXXXXX	
Miscellaneous		
Expenses:		
Preliminary expenses	XXXXXXXXXXXXXX	
Discount on issue of shares	XXXXXXXXXXXXXX	
Discount in issue of debenture	XXXXXXXXXXXXXX	Tk. XXXXXXXXXXXXX

Equity Shareholders fund or Net Worth		Tk. XXXXXXXXXXXXX

APPENDIX - NList of Accounting Variables

1. Sales Revenue
2. Cost of Production
3. Cost of Goods Sold
4. Total Capital Employed
5. Earning Before Interest and Taxes
6. Annual Operating Cost
7. Gross Profit
8. Earning After Interest and Taxes
9. Current Assets
10. Current Liabilities
11. Net Working Capital
12. Fixed Assets
13. Total Assets
14. Liquid Assets
15. Long-term Debt
16. Owner's Equity
17. Retained Earning
18. Depreciation
19. Trade Debtors
20. Trade Creditors
21. Inventory (Closing Stock)
22. Bank Overdraft
23. Reserve
24. Equity Shareholder's Net Worth
25. Total Liabilities
26. Annual Interest Payment

APPENDIX - ONote on Classification Error :

BOND bond-rating categories yielding ten possible misclassification. The computation of Percentage Classification Error may be illustrated through an example. Suppose we have a mixed sample of 4 sick(S) and 4 non-sick firms (N) with the ROI figures arranged in ascending order as follows :

3	3	3	4	6	8	10	11
(S)	(S)	N	(S)	N	N	(S)	N

Inspecting the above configuration we draw a cut-off point where the arrow is shown to separate the sick group from the non-sick group. The cut-off point is chosen in such a way so that the number of misclassification is minimised. It may be added here that such a case, there will certainly be some misclassification. In the above example, there are two misclassification shown in parenthesis) out of 8 firms. Thus the percentage Classification Error is 24%.

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APPENDIX - PDETAILS OF FINANCIAL RATIOS USED IN THE STUDY

Category & name of Ratios	Formula	Results of ratio expressed in	Significance of calculating the ratio
A. Turnover Ratio :			
1. Net Sales to Inventory = Net Sales/Inventory	NS/Inv	Time or frequency	This ratio measures the frequency or rate at which inventory was rotated during a years.
2. Net Sales to Net Working Capital = Net Sales/Working Capital	NS/NWC	Do	This ratio measures the frequency of rotating the working capital to achieve a net sales revenue in a year.
3. Fixed Assets Turnover = Net Sales/Fixed Assets	NS/FA	Do	Measures management's ability to rerate or utilize the fixed assets of the company for achieving higher sales revenue.
4. Cash Interval Ratio or Day's Cash = Cash/Total Operating Expenses	Cash/TOC	Days	Measures the adequacy or otherwise of the overall cash resources to meet operating expenses.
5. Defensive Interval Ratio =(Cash + Market Sec + A/C. Rec)/(Total Operating Expenses)	(Cash+MS+ AC.Rec)/(TOE)	Do	Measures a company's ability to meet annual operating expenses from the defensive assets when alternative sources of finance are not available.

6. No Credit Interval Ratio

$$= \frac{(DA - CL) / TOE}{\text{Total Operating Expenses}}$$
Do
- Measures a company's ability to meet annual operating expenses from defensive assets.
7. Inventory Turnover Ratio

$$= \frac{CGS / Inv}{\text{Inventory}}$$
Times or frequency
- Measures the number of times the inventory has been sold out during the year of frequency of rotating the inventory.

Profitability Ratio :

8. Gross Profit Ratio

$$= \frac{\text{Gross Profit}}{\text{Net Sales}}$$
GP/NS %
- Measures the volume of gross profit earned during a year expressed as per costage of net sales.
9. Net Profit Ratio

$$= \frac{EBIT(\text{Net Operating profit})}{NS}$$
%
- Measures the volume of net operating profit earned as per sales.
10. Net Income to Shareholders equity

$$= \frac{EAIT(\text{Net Income})}{\text{Shareholders Equity}}$$
%
- When compared to the return on total assets this ratio measures the extent to which leverage is being employed for or against the common shareholders.
11. Times Interest eaarned

$$= \frac{EBIT}{\text{Annual Interest Expenses}}$$
EBIT/AE Times or frequency
- This ratio measures the likelihood that the lenders and creditors would continue to receive the interest payment

12. Investment Turnover or Return on Assets

$$= \frac{\text{EBIT}}{\text{Total Assets}}$$
 EBIT/TA %
 This ratio is very significant as it measures the efficiency with which the assets of the company has been employed by the management.
13. Return on Investment (ROI)

$$= \left(\frac{\text{EBIT}}{\text{Net Sales}} \right) \times \left(\frac{\text{Net Sales}}{\text{Total Assets}} \right)$$
 EBIT/NS NS/Total TA
 = NP margin x Investment margin %
 Measures management's ability (in term of financial and operational efficiency) to achieve a reasonable rate of return on assets. Success in this respect calls for attaining and maintaining a good level of NP margin and investment margin.

C. Liquidity Ratio

14. Current Ratio

$$= \frac{\text{Current Assets}}{\text{Current Liabilities}}$$
 CA/CL Ratio
 This ratio is a good test of short-term debt paying ability of an industrial enterprise.
15. Quick or Acid-Test Ratio

$$= \frac{\text{Current Assets} - \text{Inv.}}{\text{CL} - \text{Bank OD}}$$
 CA-Inv./ CL-Baank O.D. Do
 This ratio is another leading measures of short-term debt paying ability of an industrial unit without having to rely on finished stock or inventory.

D. Capital Gearing Ratio

- | | | | | |
|-----|---|------------------------------|-------|--|
| 16. | Capital gearing ratio
= $(SE + Reserves) /$
(Long-term Debt) | $SE+REVE/LTD$ | Do | Measures the ratio of long-term debt to the equity capital and reserve combined. |
| 17. | Proprietary or Solvency ratio
= $SE/Total Assets$ | $SE/(Total Assets)$ | Do | Shows the protection available to the creditors and the extent of leverage being used. |
| 18. | Debt Equity Ratio
= $(Long-term debt) /$
(Shareholders Equity) | LTD/SE | % | This ratio measures the amount of assets being provided by the creditors for each dollar of assets being provided by the shareholders. |
| 19. | Debt Coverage Ratio
= $(Long-term debt) /$
(Total Assets) | LTD/TA | Ratio | This ratio measures the extent of total assets financed through long-term debt. |
| 20. | Cash Flow Coverage Ratio
= $(EBIT + Depreciation) /$
(Annual Int. Expenses) | $EBIT+ Depreciation/ AE$ | Do | Measures the volume or extent of cash flow available to finance the Annual interest expenses. |
| 21. | Capital Structure Ratio
= $(LTD + Pref. Share) /$
(Total Capital Employed) | $LTD+Prof. Share+Com. share$ | Do | Measures the ratio proportion capital to the total volume of capital employed |

E. Financial Leverage Ratio :

- | | | | |
|---|-----------------------------------|---------------------------|--|
| <p>22. Degree of financial Leverage
 $= \frac{\text{EBIT}}{\text{EBIT} + \text{Interest}}$</p> | <p>EBIT/(EBIT + Interest)</p> | <p>Do</p> | <p>Measures financial risk by measuring the percent change in earning after taxes associated with a percent change in annual operating profit</p> |
| <p>23. Earning per share
 $= \frac{\text{EBIT}}{\text{No. of Equity Share}}$</p> | <p>EBIT/(No. of Equity share)</p> | <p>Taka</p> | <p>This ratio indicates the amount of income that would be earned by the common shareholder per share.</p> |
| <p>24. Price Earning Ratio
 $= \frac{\text{Market Price per Share}}{\text{Earning per Share}}$</p> | <p>MPS/EPS</p> | <p>Times or frequency</p> | <p>This ratio is an index which shows clearly whether a share is fitting a higher market price per share as compared to its face value or sold at below its market price</p> |

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